

**Extended Contact and Attitude Generalisation:  
An Experimental Study of the Secondary Transfer Effect**

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## **DECLARATION**

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## ABSTRACT

Gordon Allport's (1954) contact hypothesis states that under optimal conditions, intergroup contact can reduce intergroup prejudice. Advances within this theoretical framework have revealed that instances of intergroup contact need not necessarily be direct (face-to-face) to achieve a significant improvement in intergroup relations, and that extended contact (i.e., the observation of positive direct contact) can produce similar results. Extended intergroup contact may be of particular relevance in post-conflict nations, such as South Africa, that are characterised by persistent segregation, mistrust, and limited opportunities for positive intergroup contact. Furthermore, it has been discovered that the benefits of intergroup contact with a primary outgroup can generalise towards secondary (infrequently- or non-encountered) outgroups – a phenomenon known as the secondary transfer effect of intergroup contact. However, research regarding both extended contact and the secondary transfer effect within the South African context is limited. The present study aimed to address these gaps in the literature. A 3-wave longitudinal, experimental research study exploring the effects of extended contact was undertaken amongst white South African female students at Stellenbosch University ( $N = 37$ ). Participants in the extended contact condition each observed their white South African female friend engaging in positive intergroup contact with a black (African) South African female confederate. Changes in attitudes and trust towards black (African) South Africans (primary outgroup) amongst these participants over time were compared to that observed amongst participants in a control condition (no direct or extended intergroup contact). The present study also explored whether attitudes and trust towards black (African) South Africans would generalise towards a secondary (unencountered) outgroup (Indian South Africans) for those participants exposed to extended contact (as compared to participants in the control condition). The results showed that extended contact did not produce a significant change in either attitudes or trust towards black (African) South Africans (although the results were in the hypothesised direction, suggesting that the study may have been underpowered). However, changes in both attitudes and trust towards black (African) South Africans from Time 1 to Time 2 significantly predicted more positive attitudes and greater trust towards Indian South Africans at Time 2 (controlling for prior contact with Indian South Africans), supporting the secondary transfer effect for extended contact.

## OPSOMMING

Volgens Gordon Allport (1954) se kontakhipotese kan intergroeptkontak onder optimale omstandighede intergroeptvooroordel verminder. Vooruitgang binne hierdie teoretiese raamwerk het aan die lig gebring dat gevalle van intergroeptkontak nie noodwendig direk (van aangesig-tot-aangesig) hoef te wees om 'n beduidende verbetering in intergroeptverhoudinge te bewerkstellig nie, en dat middellike kontak (d.w.s. die waarneming van positiewe direkte kontak) soortgelyke resultate kan lewer. Middellike kontak tussen groepe kan veral van belang wees in na-konflik samelewings, soos Suid-Afrika, wat gekenmerk word deur aanhoudende segregasie, wantroue, en beperkte geleenthede vir positiewe intergroeptkontak. Verder is dit ontdek dat die voordele van intergroeptkontak met 'n primêre buitengroep veralgemeen kan word teenoor sekondêre (ongereeld of selfs glad nie teëgekom nie) groepe - 'n verskynsel bekend as die sekondêre oordrageffek van intergroeptkontak. Navorsing rakende beide middellike kontak en die sekondêre oordrageffek binne die Suid-Afrikaanse konteks is egter beperk. Die huidige studie het ten doel gehad om hierdie leemtes in die literatuur aan te spreek. 'n 3-golf longitudinale eksperimentele navorsingstudie wat die gevolge van middellike kontak ondersoek het, is onder wit Suid-Afrikaanse vroulike studente aan die Universiteit van Stellenbosch (N = 37) onderneem. Deelnemers aan die middellike kontakondisie het elkeen hul wit Suid-Afrikaanse vroulike vriendin waargeneem wie positiewe intergroeptkontak met 'n swart (Afrikaan) Suid-Afrikaanse vroulike konfedeeraat gehad het. Veranderings in houdings en vertroue teenoor swart (Afrikaan) Suid-Afrikaners (primêre buitengroep) onder hierdie deelnemers is mettertyd vergelyk met dié waargeneem onder deelnemers in 'n kontroleondisie (geen direkte of middellike intergroeptkontak nie). Die huidige studie het ook ondersoek ingestel na die vraag of houdings en vertroue teenoor swart (Afrikaan) Suid-Afrikaners veralgemeen na 'n sekondêre (onbetrokke) buitengroep (Indiese Suid-Afrikaners) vir die deelnemers wat blootgestel is aan middellike kontak (in vergelyking met die deelnemers aan die kontroleondisie). Die resultate het getoon dat middellike kontak nie 'n beduidende verandering in houdings of vertroue teenoor swart (Afrikaan) Suid-Afrikaners veroorsaak het nie (hoewel die resultate in die rigting van die hipoteses was, wat daarop dui dat die studie moontlik te min krag gehad het). Veranderings in beide houdings en vertroue teenoor swart (Afrikaan) Suid-Afrikaners van Tyd 1 tot Tyd 2 het egter beduidend meer positiewe houdings en meer vertroue teenoor Indiese Suid-Afrikaners op Tyd 2 voorspel (selfs met voorafgaande kontak met Indiese Suid-Afrikaners inaggenome), wat die sekondêre oordrageffek vir middellike kontak ondersteun.

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## **CHAPTER ONE**

### **INTERGROUP CONTACT IN SOUTH AFRICA**

South Africa comprises of multiple ethnic and cultural groups (Statistics South Africa, 2017). Yet, South Africa has concerning levels of intergroup prejudice, stemming, in large part, from the legacy of the Apartheid era, which spanned more than four decades and was characterised by heightened intergroup tension and conflict (see Bornman, 2011; Finchilescu, Tredoux, Mynhardt, Pillay, & Muianga, 2007; Habte & Wagaw, 1993). Whilst ethnic segregation and a lack of intergroup tolerance most certainly existed prior to the National Party's rise to power in 1948, the Apartheid government took to creating systematic legislation that sought racial separation, both in a physical/geographical sense and in terms of attributed ethnic groups' rights.

Taken together these laws effectively criminalised social and intimate ethnic intergroup contact (Schensul & Heller, 2011). This legislation shaped and dictated intergroup behaviours and attitudes for decades. In 1994 South Africa held its first democratic elections, which saw the National Party replaced with newly elected African National Congress (ANC), and the abolishing of Apartheid legislation. The fall of the Apartheid regime brought with it the expectation that intergroup tensions would be lessened (Bornman, 2011). However, while no longer governmentally mandated, South Africans still display a noteworthy resistance towards intergroup contact, and a tendency for self-imposed ethnic segregation (Alexander & Tredoux, 2010; Finchilescu et al., 2007).

This chapter attempts to trace the societal effects that Apartheid policies, laws and societal practices had on ethnic intergroup contact and relations. Furthermore, it examines how these effects have permeated into and lingered within the South African psyche and its citizens' lifestyles, even some 25 years since the fall of the Apartheid regime. In doing so, this chapter reveals how South African universities present one of the greatest opportunities for the implementation of interventions aimed at reducing intergroup prejudice. Furthermore, in this chapter I explore how contact theory (see Hewstone & Swart, 2011), as a theoretical framework, is contextually appropriate for South Africans in this regard, and how recent advances in the field hold immense potential for a widespread reduction in intergroup prejudice that can generalise across multiple groups.

## **Apartheid and the Criminalisation of Intergroup Contact**

Often referred to as the 'Rainbow Nation', South Africa comprises of some 57.73 million citizens, all of whom hail from a wide variety of ethnic and cultural backgrounds (Statistics South Africa, 2017). However, even as the Nation celebrates its twenty-fifth year of democracy, its citizens still show a noted propensity for avoiding intergroup contact (Alexander & Tredoux, 2010; Finchilescu et al., 2007). This serves, in part, to highlight the lingering societal impact the Apartheid regime left in its wake. Backed by the pre-established 1910 constitution of South Africa, which dictated a social order in which 'white' citizens were given 'ethnic superiority' over other 'coloured' ethnic groups, the establishment of the Apartheid government brought with it laws and policies designed to assert this perceived white racial superiority (Beck, 2000; Habte & Wagaw, 1993; Thompson, 2006). Indeed, these laws and policies were even partly based upon the assertion that intergroup relations breed only fear, mistrust and hatred, a belief seemingly backed by selective psychological research at the time (Beck, 2000; Habte & Wagaw, 1993).

One of the first laws introduced during Apartheid was that of the Population Registration Act of 1950, which required all South Africans to be classified and categorized into one of four distinct ethnic groups: 'white', 'coloured' (or mixed race), 'Indian' and 'black' (African) South Africans. This Act laid the foundation for further legislation to come, such as the Group Areas Act (1950), which sought physical ethnic group separation in the form of ethnically designated residential areas (in accordance with the classifications above). This ethnic group separation was further enforced through the Natives Resettlement Act of 1954, which provided the State with the overarching legal power to dictate forcible relocation of citizens categorised as 'black' (African), 'Indian', or 'coloured' from cities into designated, physically removed and distinct, informal settlements, or 'townships'. It is estimated that from 1960 to 1983 some 3.5 million South Africans were forcefully removed from their homes and relocated in accordance with these segregationist laws (Surplus People Project, 1983; Thompson, 2006).

Contact between ethnic groups was further restricted by the introduction of the Pass Laws of 1952, which required all citizens not categorised as 'white' under the Population Registration Act to carry identification documents that regulated and heavily restricted freedom of movement between designated 'ethnic zones' identified in the Group Areas Act. Ethnic segregation was further imposed through the Reservation of Separate Amenities Act of 1953, which introduced

distinct, ethnically designated transport, sports grounds, beaches, bars/restaurants and even toilets, along with a great many other amenities. Education also felt the impact of these restrictions, with laws passed that mandated ethnically distinct and separated schools (1953), technical colleges (in 1955) and universities (in 1959). Intimate contact between ethnic groups was socially stigmatised and outlawed through the Prohibition of Marriages Act (1949/1969), which criminalised intergroup marriages. This Act effectively forced intergroup friends and families to be torn apart and often forcibly separated under threat of legal repercussions.

Together, these laws and policies served to criminalise and stigmatise most instances of ethnic intergroup contact (excluding those between white master/employer and, 'non-white' servant/employee), leaving South Africa a veritable 'non-contact' nation (Schensul & Heller, 2011). Ironically, it was the very introduction and enforcement of such laws and policies, put forward under the guise of supposedly promoting intergroup harmony, which brought about the exact opposite effects, as Apartheid was categorised by heightened intergroup mistrust and conflict (Beck, 2000; Habte & Wagaw, 1993). These feelings accumulated and culminated in instances of intergroup violence such as the Sharpeville massacre of 1960, in which state police opened fire upon protesters marching against the introduction of the Pass Laws. While the exact number of deaths and injuries during this march are still contested to this day, it is estimated that roughly 72 individuals lost their lives and a further 186 were seriously injured (Habte & Wagaw, 1993).

Similarly, the mass protest that was later dubbed the 'Soweto uprising' was met with extreme force from state police who opened fire upon the protesting school children. During the early half of the 1970's, more and more 'non-white' South Africans were entering into the separate and poorly governed 'non-white' South African education system, despite its noted lack of state funding and resources, the cost of tuition fees, and the overall poor quality of its facilities (Thompson, 2006). These conditions, coupled with the government decree in 1976 that half of the curriculum in these schools would be taught in Afrikaans (a language commonly associated with white South Africans and the Apartheid government), brought the feelings of tension and dissatisfaction in students to a boiling point and some 15,000 school children took to the streets in Soweto in protest. The 'Soweto uprising' culminated in an estimated 451 deaths and a further 2,389 injuries (Habte & Wagaw, 1993).

Such instances of intergroup conflict, along with an overwhelming sense of intergroup mistrust and anxiety in day-to-day functioning, left many in South Africa and abroad fearing the Country was headed towards a civil war. That was until then President F.W. de Klerk made the historic decision to unbanned the ANC party and release its leaders from prison in 1990 (Beck, 2000; Habte & Wagaw, 1993; Thompson, 2006). Among those leaders released was Nelson Mandela, who later became the first democratically elected black (African) president of South Africa, ushering in the process of the dismantling of the Apartheid regime and its policies.

### **Intergroup Contact in Post-Apartheid South Africa**

The end of Apartheid, along with its associated laws and policies, brought with it an expectation that ethnic intergroup relations would be improved as a result (Bornman, 2011). South Africa's citizens of all races/ethnic-groups were finally allowed to live in the same areas, attend the same schools and universities, and generally mix and interact freely (Finchilescu et al., 2007). This sense of newfound optimism for intergroup reconciliation and harmony was even seen reflected in the newly founded constitution of South Africa (Moller, Dickow, & Harris, 1999). According to South Africa's new constitutional rights, all ethnic groups share the resources of the Country and have equal rights within it (Moller et al., 1999). The fledgling democratic South African government attempted to bridge the cultural, linguistic, and socio-historical divide amongst South Africa's various population groups with its nation-building initiatives, hoping to create a unifying South African identity (Eaton, 2002).

Unfortunately, the fear, mistrust and anxiety surrounding intergroup contact, heightened during the Apartheid era, has not been easy to overcome (Schensul & Heller, 2011). Whilst no longer legally enforced, South Africans continue to display a self-segregation of groups and a general lack of intergroup contact (Alexander & Tredoux, 2010; Schensul & Heller, 2011). This self-segregation is characterised by homogenised living spaces such as same-group neighbourhoods and schools, and a general avoidance of intergroup contact whenever possible (Alexander, 2003; Dixon, Tredoux, Durrheim, Finchilescu, & Clack, 2008). The most recent national 'South African Reconciliation Barometer Survey' report, conducted by the Institute for Justice and Reconciliation (IJR) and compiled by Elnari Potgieter in 2017, using representative probability samples across South African ethnic groups, noted that of the 2,400 participants

sampled only 32.3% felt that intergroup relations had improved since South Africa became a democratic nation in 1994, while 29.4% of the participants indicated they felt that relations had, in fact, further deteriorated in that time period. Indeed, 38.3% of participants cited feeling that there had been no change in intergroup relations when compared to the Apartheid era (Potgieter, 2017). Whilst contextually these percentages represented an over-all gradual increase in perceptions of better intergroup relations when compared to earlier years, these percentages and their time of capturing (19 years into South African democracy) reveals that this increase is, to quote the IJR directly, “remarkably muted and slow” (Potgieter, 2017, p.23), with the majority of participants at the time perceiving that intergroup relations had either remained stagnant or indeed become worse (Potgieter, 2017). Furthermore, the IJR survey noted that 39.4% of participants reported to have daily intergroup interactions/contact in places of study or in the workplace (Potgieter, 2017). These findings therefore suggest that a significant portion of South Africans feel intergroup relations are still lacking in quality and quantity. Possible reasons suggested as to why these feelings have been found to persist so long after the fall of the Apartheid regime include both a lack of realistic opportunities for intergroup contact (i.e., financial or geographic limitations and constraints) as a result of the lingering structural effect of the Apartheid era (segregated communities/neighbourhoods, the economic disparity between groups, etc), and indeed perhaps even a lingering desire (born out of anxiety/fear) for self-segregation and homogenisation.

However, this ongoing South African tendency towards ethnic segregation is complicated in instances of necessitated interethnic contact, and even co-operation, such as in institutions of higher learning (Finchilescu et al., 2007; Tredoux & Finchilescu, 2007). For example, like most previously white South African universities that excluded non-white citizens during Apartheid, Stellenbosch University (SU) has a student body that reflects South Africa’s various ethnic and cultural groups (Stellenbosch University, 2017). As such, South African universities provide young South Africans with opportunities for regular contact and co-operation with outgroup members, be it during lectures, on the sport field in athletic/sport teams, in shared residences or simply during the course of regular campus life. However, the avoidance behaviours, and self-segregation observed in national representative samples of the broader South African population (e.g., Potgieter, 2017), have also been observed at South African universities (Finchilescu et al., 2007). Schrieff, Tredoux, Dixon and Finchilescu (2005), conducted a month-long study of university students’ seating habits within university residence dining halls. Their study clearly



noted a tendency for students to self-segregate within the dining halls (as observed by their seating patterns) and avoid contact and proximity with students of other outgroups (Schrieff et al., 2005). This was particularly the case between black (African) and white South African students (Schrieff et al., 2005). Indeed, a later longitudinal study conducted by Schrieff, Tredoux, Finchilescu, and Dixon (2010) found that not only does the process of self-segregation occur rapidly, it also occurs consistently over a long period.

With this noted tendency for South African university students to avoid instances of ethnic intergroup contact in mind, focus has begun to shift towards studies that examine what happens when instances of positive ethnic intergroup contact are organised and promoted in these universities. While the number of such studies are, at present, relatively small in number, their respective results seem to suggest a shared commonality; that instances of positive ethnic intergroup contact between students produces a statistically noteworthy reduction in prejudicial attitudes towards contacted (and indeed, in some cases, even non-contacted) outgroups. While each suffering somewhat from methodological and resource restrictions, these promising South African studies suggest a noteworthy need for research regarding the promotion of positive intergroup contact particularly within the context of South African universities, such as Stellenbosch University.

### **Introduction to Contact Theory as a Theoretical Framework**

Gordon Allport's (1954) contact hypothesis states that instances of positive, direct (face-to-face) intergroup contact are capable of reducing outgroup prejudice and improving intergroup relations. Sixty years of contact research has established the significant inverse relationship between positive intergroup contact and outgroup prejudice as one of the most robust effects in social psychology (for a meta-analysis see Pettigrew & Tropp, 2006).

Advances in our understanding of why, how, and when positive intergroup contact is capable of reducing prejudice have elevated Allport's (1954) contact hypothesis to a bona fide theory (see Hewstone & Swart, 2011). These advances in contact theory include the observation that indirect (extended and vicarious) forms of intergroup contact can yield similar reductions in intergroup prejudice as compared to direct, face-to-face intergroup contact (see Vezzali, Hewstone, Capozza, Giovannini, & Wölfer, 2014; Wright, Aron, McLaughlin-Volpe, & Ropp,

1997). The term ‘extended contact’, within the theoretical framework of contact theory, refers to instances of contact in which the participant does not undergo any actual direct (face-to-face) physical contact with an outgroup member, but is instead exposed to instance of intergroup contact vicariously (e.g., through observation of intergroup contact scenarios).

Furthermore, recent research has found that positive intergroup contact does more than reduce prejudice towards the outgroup member being encountered or the broader outgroup to which they belong. Positive contact effects can generalise beyond the primary contacted outgroup to include more positive attitudes towards secondary outgroups as well (or outgroups that were not encountered in the original contact setting). This phenomenon is known as the Secondary Transfer Effect (STE) of contact (Lolliot et al., 2013; Pettigrew, 2009). The STE of direct contact has been strongly supported thus far in the literature (e.g., Pettigrew, 1997; Pettigrew & Tropp, 2006; Van Laar, Levin, Sinclair, & Sidanius, 2005). However, only limited evidence exists for the STE of extended intergroup contact – a gap that the present study aimed to address.

## **The Present Study**

The present study is located at the intersection of two recent advances in contact theory, namely the potential of extended contact to reduce prejudice and the secondary transfer effect of contact. Specifically, the present study, undertaken amongst white South African female student participants at Stellenbosch University, employed a three-wave longitudinal experimental design to test whether indirect (extended) exposure to experimentally manipulated positive intergroup contact with a black (African) South African female confederate not only improved attitudes towards the primary (black (African) South African) outgroup, but also improved attitudes towards a secondary outgroup (Indian South Africans) not involved in the experimentally manipulated contact setting (REC Approval Number: 8840). The present study is described in detail in Chapter Three.

## **Overview of Chapters**

Chapter one briefly traced the state of intergroup attitudes and behaviours of South Africans from the Apartheid era to the present day. Furthermore, this chapter has outlined the nature of the

present study and has provided a brief overview of the theoretical framework of contact theory, within which the present study was undertaken.

Chapter two provides a more in-depth discussion regarding the development of Allport's (1954) contact hypothesis and its evolution into contact theory. This discussion includes a more detailed look at extended contact, and its potential for prejudice reduction. Moreover, this chapter discusses some of the key mediators of the contact-prejudice relationship, highlighting how or why contact is capable of reducing prejudice. Chapter two also describes the secondary transfer effect of intergroup contact, and its potential for widespread generalisation of intergroup prejudice reduction, with a particular focus on the emerging South African research in this regard.

Chapter three presents the rationale, aims, objectives, and hypotheses for the present study, and offers a detailed overview of the procedures employed in this experimental three-wave longitudinal study. This chapter concludes by summarising the key results of the present study.

Chapter four presents a discussion of the results of the present study. This discussion is contextualised within the current body of literature regarding intergroup contact and the STE. Furthermore, this chapter will review some of the limitations of the present study and concludes with suggested directions for future research.

## CHAPTER TWO

### A REVIEW OF THE CONTACT LITERATURE

Apartheid South Africa prohibited ethnically based intergroup contact through a variety of laws and policies, and the social stigma which accompanied them. This placed Apartheid South Africa firmly into Foster and Finchilescu's (1986) categorisation of a 'non-contact' society. The resulting societal effects of Apartheid can still be found lingering in modern South African society, as witnessed by the (often) self-imposed tendency for physical and societal intergroup separation. With a notably diverse cultural populace, societal reconciliation and co-operation places high on the list of South Africa's needs as a nation in order to grow and prosper. Unfortunately, it has been found that this process of reconciliation and intergroup prejudice reduction struggles to occur where intergroup contact is avoided (Pettigrew & Tropp, 2006). The body of literature regarding intergroup contact shows that instances of positive intergroup contact plays a key role in promoting intergroup tolerance, reconciliation and co-operation, particularly in post-conflict, non-contact, nations such as South Africa (Brown & Hewstone, 2005; Dovidio, Love, Schellhaas, & Hewstone, 2017; Hewstone et al., 2014; Pettigrew & Tropp, 2006). However, factors such as intergroup anxiety and a lack of cross-group friendships, amongst others, make instances of intergroup contact more difficult to initiate or promote in societies with a history of intergroup conflict (Stephan & Stephan, 1985; Stephan, Stephan, & Gudykunst, 1999).

The key to understanding and overcoming these obstacles and successfully integrating intergroup contact, thereby reducing intergroup prejudice levels as a result, may very well lie in contact theory. This chapter traces the development of contact theory from its foundations as a hypothesis proposed by Gordon Allport in 1954, to our present-day understanding. As such, this chapter not only includes an examination of direct contact and the importance of cross-group friendships, but also how these aspects relate to the discovery and nature of an additional dimension of intergroup contact with the potential for widespread intergroup prejudice reduction; extended contact. Following this, the psychological keystones of extended contact will be presented and discussed. Subsequently, an examination of the mediators of the contact-prejudice relationship, specifically intergroup anxiety and self-disclosure, will be expounded upon. The

chapter will then conclude with an examination of a recent advancement in contact theory, namely the secondary transfer effect of contact (STE of contact), including its links to attitude generalisation, other possible explanations for the STE, and the noted benefits of the STE in post-conflict contexts.

## **Development of the Contact Hypothesis**

Beginning in the 1930's, researchers and academics (particularly within the field of social psychology) began to explore the notion of prejudice and ethnic group relations more explicitly than in earlier years (i.e. Allport, 1942; MacCrone, 1930, 1932, 1933; Van Rensburg, 1938; see also Pettigrew & Tropp, 2006). This was possibly due to a combination of factors such as growing worldwide awareness of intergroup relations, population diversity, and growing calls for minority group rights. Many researchers during this period postulated that bringing ethnic groups into contact with one another under conditions of equality could only lead to increased levels of suspicion and fear between said groups (i.e. Fick, 1929, 1939; Union of South Africa, 1928-1930; Wilcocks, 1931, 1932). For example, Sims and Patrick (1936) reported an increase in 'anti-black' attitudes each year that white students from 'Northern' states in the United States remained in universities and colleges located in the American South (a region that had a long history of slavery and anti-black prejudice).

However, this notion that intergroup contact breeds further prejudice did not go uncontested. Indeed, the budding body of research regarding intergroup contact at the time led some researchers to hypothesize that in actuality the reverse was true, that ethnic intergroup contact could in fact lead to an increased understanding between groups thereby allowing for greater levels of intergroup tolerance and cooperation (Allport, 1954; Biesheuvel, 1949; Malherbe, 1946; Russell, 1961). For instance, Smith's (1943) evaluation of the 'social travel program', which asked African American families in Harlem to host a white Columbia University student for two weeks, found a stark improvement in these white students' attitudes regarding African Americans both as individuals and as an ethnic group following this period of contact and cohabitation.

Following the conclusion of World War II, and the gradual desegregation of the military and other public institutions, interest in these conflicting hypotheses relating to the relationship

between intergroup contact and prejudice was reinvigorated (Nagda, Tropp, & Paluck, 2006). It was this increased interest that prompted the Social Science Research Council of America to task Cornell University Sociologist Robin Williams Jr. to critically analyse the existing body of research regarding intergroup relations (Williams, 1947). In his review, Williams (1947) noted that there was indeed a potential for reducing prejudice between ethnic groups using 'intimate' intergroup contact. However, Williams (1947) further noted in his research a recognition that there are likely to be a multitude of variables that may influence this contact-prejudice relationship. Indeed, Williams (1947) asserted that the potential of intergroup contact for the reduction of intergroup prejudice was increased when these groups shared a similar status, interests and goals.

Using Williams' (1947) findings as a foundational starting point for his own research, American psychologist Gordon Allport (1954) proposed what became known as the contact hypothesis. Allport (1954) suggested that positive intergroup contact could indeed lead to markedly reduced intergroup prejudice. Allport's (1954) contact hypothesis has received substantial empirical support over the past 60 years (see the meta-analytic review of Pettigrew & Tropp, 2006) and formed the foundation for the development of what we now refer to as contact theory. Pettigrew and Tropp's (2006) seminal meta-analysis of over 500 individual contact studies, undertaken amongst a variety of groups and in a variety of contexts, confirmed the statistically significant inverse relationship between contact and prejudice that was hypothesised to exist by Allport (1954). Their research will be expounded upon in greater detail at a later point in this chapter.

### **Allport's optimal conditions for contact.**

Allport's (1954) contact hypothesis stressed four key conditions for 'optimal' intergroup prejudice reduction. These conditions stipulated that instances of intergroup contact required situations in which there is equal group status, shared group goals, intergroup co-operation, and where intergroup contact is supported by the relevant laws, authorities and societal customs. Allport (1954) argued that intergroup contact under these optimal conditions would allow for similarities between groups to be highlighted and for previously held notions regarding an outgroup to be re-evaluated, in turn facilitating an increase in more accurate knowledge regarding the outgroup. Allport (1954) posited that this increased knowledge would result in decreased levels

of intergroup anxiety and prejudice, which would further facilitate reconciliation between groups, thereby improving relations and co-operation between them (see also Pettigrew, 1998).

Allport's (1954) key conditions for intergroup contact sparked debates within the academic community as to which of these conditions was most significant and relevant in the facilitation of intergroup prejudice reduction. For instance, 'equal status between groups', within the context of intergroup contact, was indeed supported by other researchers' findings in similar studies (e.g. Patchen, 1982; Robinson & Preston 1976), yet many researchers argued as to the exact definition of 'equal status' (Cagle, 1973; Pettigrew, 1998; Riordan, 1978). Some researchers stressed the importance of 'equal group status' before initial intergroup contact (Brewer & Kramer, 1985; see also Pettigrew, 1998). Yet, it is rarely the case with intergroup relations that differing groups are equal in status, as many notable instances of intergroup separation are, by nature, intrinsically linked to unequal power relations (i.e., South African Apartheid). However, meta-analysis found this grander form of equality to be secondary in importance to the notion that groups perceive equal status/treatment within the specific context/instance of the established intergroup contact itself (Mullen, Brown, & Smith, 1992; Pettigrew & Tropp, 2006).

The notion that shared intergroup goals aids in the reduction of intergroup prejudice is predicated on the idea that individuals within a group need each other when striving to achieve a common goal (Pettigrew, 1998). It is theoretically this realisation, that in order to achieve certain common goals individuals within and between groups need to rely on one another, that breeds greater acceptance between individuals and their groups (Pettigrew, 1998). This notion is linked to the principle of intergroup co-operation, which postulates that the attainment of goals must be an intergroup dependent effort (i.e. sport teams, workplace teams/groups, student research/project groups, etc), rather than competitive (Pettigrew, 1998), because such co-operation breeds familiarity and acceptance far more than competition does. The importance of common goals, interdependence and co-operation has been highlighted in a variety of studies. One such example is that of the research conducted by Stouffer (1949), which revealed that white soldiers coming into contact experiences with black/African-American soldiers during WWII (i.e. working together as a unit/squad to achieve military objectives and relying on each-other's support) was associated with an increase in these soldiers' positive attitudes towards black individuals overall.

Of course, perhaps one of the most famous and widely cited examples regarding the nature and importance of intergroup equal status, co-operation, and common goals is that of Sherif, Harvey, White, Hood, and Sherif's (1954/1961) research on 'intergroup conflict and cooperation', commonly referred to as 'The Robbers Cave Experiment'. This study was conducted over a period of three weeks and involved the researchers posing as camp personnel of a some 200-acre summer camp based in Robbers Cave State Park, Oklahoma (Sherif et al., 1954/1961). The participants of this study were eleven to twelve-year-old boys ( $N = 22$ ) from roughly comparable backgrounds who, prior to being invited to this summer camp, had never met one-another (Sherif et al., 1954/1961). The first phase of this study involved splitting the boys equally into two teams based on certain shared similarities (Sherif et al., 1954/1961). The second phase introduced competition through 'camp games' in which the two teams were pitted against one another to compete for valued prizes (Sherif et al., 1954/1961). It was observed during this phase that the tension between these groups underwent a marked increase which led to the members of these groups developing negative attitudes and evaluation of the opposing team and their members (Sherif et al., 1954/1961). In the third and final phase of the study participants were given teamwork-based tasks, which importantly required intergroup cooperation to achieve (Sherif et al., 1954/1961). During this phase it was noted that participant outgroup attitudes underwent a process of marked positive improvement and thusly intergroup conflicts/tensions was greatly reduced (Sherif et al., 1954/1961). These results led researchers to conclude that (1) intergroup competition, which allows for only one group to attain valued resources, breeds intergroup tensions and conflicts; (2) mere intergroup contact under such conditions is not enough to promote positive outgroup attitudes; and (3) that intergroup conflict and tensions can be lessened and possibly even overcome through the introduction of common goals, which promote/require intergroup cooperation, in conditions of perceived equal status (Sherif et al., 1954/1961).

Interestingly it was the 'support and acceptance of the law, authorities, and societal customs' that Allport (1954) himself posited as being perhaps the most integral conditions in the promotion of positive intergroup attitudes. Allport (1954) asserted that without such backing, intergroup contact would understandably be avoided, resisted and viewed overall more negatively, resulting in prejudice levels remaining stagnant, or indeed even becoming heightened (Allport, 1954; Pettigrew, 1998). Beck, Linden, and Siegel (1980) noted that a more positive intergroup



climate was created in desegregated schools when guided and supported by the relative authorities and governing bodies, when compared to such schools that received authoritative opposition.

The contact hypothesis, and its associated optimal conditions, received its fair share of criticism following its proposal. An early dilemma faced by contact theory was that many of the researchers who supported the contact hypothesis began proposing their very own perceived 'key' conditions, which they claimed to facilitate greater levels of prejudice reduction through intergroup contact (see Ben-Ari & Amir, 1986; Wagner & Machleit, 1986). This increase in interest ironically posed issues in terms of the overall clarity and understandings of the contact hypothesis. For instance, if one were to take all these newly suggested conditions as 'essential', as many researchers suggested, it would seemingly eliminate the potential for positive intergroup contact in any real-life context. This would suggest that no context can realistically be expected to facilitate all of these conditions (Pettigrew, 1998). Further complicating the matter was the possibility that some of these conditions (including Allport's own) may indeed effect prejudice levels at differing stages of intergroup contact and this, in turn, begged the question of when to implement such conditions during the contact process (Pettigrew, 1998). This raised further concerns regarding the overall lack of clarity as to which of these proposed conditions were essential, or simply facilitating, in the overall contact-prejudice relationship (Pettigrew, 1998).

### **Support for the Contact Hypothesis**

In an effort to examine and combat any lingering concerns regarding the efficacy of positive intergroup contact for reducing intergroup prejudice, Pettigrew and Tropp (2006) conducted a seminal meta-analysis in an attempt to definitively ascertain the connection between contact and prejudice. This meta-analysis included 515 independent studies and 713 independent data samples, using several differing ingroups and outgroups, across a variety of contexts. The selection criteria for these studies were simple, yet rigorous; only studies that dealt with direct contact situations involving members of different groups were eligible for selection (Pettigrew & Tropp, 2006).

The results of this meta-analysis concluded that there was indeed a definitive inverse relationship between intergroup contact and prejudice (mean  $r = -.22$ ,  $p < .001$ ) across 94% of the examined studies (Pettigrew & Tropp, 2006). Importantly, Pettigrew and Tropp (2006) found that

the benefit of positive contact for attitudes towards outgroup individuals generalised towards the outgroup as a whole (mean  $r = -.21$ ,  $p < .001$ ). Furthermore, they found that while Allport's (1954) 'optimal' conditions did strengthen the inverse relationship between positive contact and prejudice ( $r = -.29$ ,  $p < .001$ ), studies that did not meet any of these 'optimal' conditions also yielded a significant mean inverse relationship between contact and prejudice ( $r = -.20$ ,  $p < .001$ ). This suggests that Allport's (1954) conditions are facilitating as opposed to essential for the reduction of prejudice (Pettigrew & Tropp, 2006).

### **Dimensions of Contact**

With more and more studies finding evidence for an inverse relationship between intergroup contact and intergroup prejudice, some researchers began to shift their focus towards identifying the different forms or dimensions of contact that are associated with reduced prejudice. This shift in research focus led to the pivotal discovery that intergroup contact of a direct nature (face-to-face) was not the only form of contact that could lead to a reduction in prejudice. Indeed, it was discovered that even contact of an indirect nature (extended contact) reliably produced a reduction in intergroup prejudice levels (Vezzali et al., 2014; Wright et al., 1997; Zhou, Page-Gould, Aron, Moyer & Hewstone, 2019). The exact nature and dimensions of these forms of contact, as well as their slightly differing results in reducing prejudice levels between groups, are described in greater detail below.

#### **Direct contact.**

Direct intergroup contact refers to instances of face-to-face contact that takes place between members of different social groups (Pettigrew & Tropp, 2006). This form of contact served as the primary foundation for early intergroup contact research, including Allport's (1954) own contact hypothesis. Afterall, it is this form of contact that forms the basis of most natural interactions in an individual's day-to-day life the world-over, be it in institutions, through commerce, or in one's local community.

One of the earliest, and most important, distinctions made regarding direct contact was that between the dimensions of contact quality (the perceived intimacy of the contact) and quantity (the

frequency of contact scenarios in variety of settings). Islam and Hewstone (1993) undertook a study aimed at investigating the unique contributions of these dimensions of contact to the reduction of intergroup prejudice. Their study asked 66 majority-group Muslim students and 65 minority-group Hindu students from the University of Bangladesh a series of questions regarding their attitudes towards, and interactions with, members of the other group. The findings of this study were that both the quality and quantity of contact played a statistically significant role in prejudice reduction. However, it was found that the quality of contact had a stronger association with prejudice reduction ( $\beta = .48, p < .001$ ) than the quantity of contact did ( $\beta = .12, p < .05$ ; Islam & Hewstone, 1993).

Islam and Hewstone's (1993) findings have since been replicated across a multitude of intergroup contexts, including the relationship between white British and South Asians in England (e.g., Prestwich, Kenworthy, Wilson, & Kwan-Tat, 2008), relations between Amish and non-Amish in America (McGuigan & Scholl, 2007), youth perceptions of German youth in Finland (Jasinskaja-Lahti, Mähönen, & Liebkind, 2011), and youth perceptions regarding the elderly in Northern Ireland (e.g., Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006; for a more detailed review see Hodson, Hewstone, & Swart, 2013).

Pettigrew and Tropp's (2006) meta-analysis discovered that in 154 similar studies that included quality as a measure of contact there was generally a stronger inverse relationship with prejudice (mean  $r = -.25, p < .001$ ) than those tests that used quantity as a measure for contact (mean  $r = -.21, p < .001$ ). One of the most effective means of promoting positive, 'high-quality' intergroup contact is through the facilitation of cross-group friendships. Pettigrew and Tropp (2006) noted that cross-group friendships exhibited a stronger ( $p < .05$ ) inverse relationship with prejudice ( $r = -.26$ ) as compared to general contact ( $r = -.22$ ).

Cross-group friendships require repeated contact over a length of time, in a variety of contexts, with individuals having equal status within the context of the friendship, which aid in co-operation between members towards a shared goal (Pettigrew, 1998; Pettigrew & Tropp 2006; Pettigrew, Tropp, Wagner, & Christ, 2011). The value of cross-group friendships for the reduction of intergroup prejudice has been examined and confirmed in a multitude of studies and contexts (see the meta-analyses undertaken by Pettigrew & Tropp, 2006; Davies et al., 2011). These results have also been replicated and observed in longitudinal studies.

Levin, Van Laar, and Sidanius (2003) conducted a study sampling 2,000 first year students from the University of California Los Angeles (UCLA) over a period of five years. The participant demographics of this study were 32% Caucasian, 36% Asian-American, 18% Latino, and 6% African American. They found that those students who reported fewer cross-group friendships at the start of their longitudinal study were found to have higher levels of ingroup bias towards the end of the study than other participants. Similarly, a longitudinal study conducted by Titzmann, Brenick, and Silbereisen (2015) sought to examine whether native adolescent Germans' (N = 372) cross-group friendship (or lack thereof) with an immigrant at differing points in time prompted a change in their prejudice towards immigrants as an outgroup. This study found that native German adolescents who gained a cross-group friendship with an immigrant outgroup member over the three time points of the study were found to undergo a significant decrease in negative prejudice towards immigrants over time. Furthermore, the study highlighted that these cross-group friendships were more readily and effectively maintained in instances where participants had many opportunities for intergroup contact, where such contact was not societally viewed as negative in nature, and in instances where participants reported high levels of self-efficacy (Titzmann et al., 2015).

This potential for cross-group friendships to positively strengthen intergroup relations has also been observed within the South African context (see Dixon et al., 2010; Swart, Hewstone, Christ & Voci, 2010, 2011). Swart et al., (2011) conducted a three-wave longitudinal study that aimed to examine cross-group friendships between 300 coloured and white South African high school students. They found that cross-group friendships with white South Africans at Time 1 was associated with lowered prejudice towards white South Africans at Time 3.

### **Extended contact.**

It was once thought that direct contact was the only form of contact capable of improving intergroup attitudes. However, in the late 1990's research shifted somewhat to focus on the impact of other forms (or dimensions) of intergroup contact and their relationship with prejudice. Pivotal research conducted by Wright et al., (1997) proposed that instances of extended (indirect) intergroup contact could be similarly sufficient in producing a statistically significant drop in prejudicial attitudes between groups.

Wright et al. (1997) argued that the mere observation (or knowledge) of positive intergroup contact between a fellow ingroup member and a member of the outgroup can result in the promotion of more positive outgroup attitudes amongst the ingroup observer. To test this idea, Wright et al. (1997) undertook a series of four studies that not only established the legitimacy of the inverse relationship between extended intergroup contact and prejudice, but formed the foundation of the substantial body of research on extended contact that followed in the two decades since. These four studies made use of three distinct research methodologies, namely; questionnaires, planned instigated group conflict, and a minimal group experiment (Wright et al., 1997).

Study 1 took the form of a questionnaire-based study, and aimed at testing the effects that knowledge of cross-group friendships had on participants' (white American University students; N =84) prejudice levels regarding Asian Americans, African Americans, and 'Latinos/Latinas' (Wright et al., 1997). The results of this study found a strong causal connection between extended contact (knowledge based) and a reduction in prejudicial outgroup attitudes (Wright et al., 1997). The second of these four studies was similarly questionnaire based, and made use of a mixed sample group including white, Asian American, African American, and 'Latino/Latina' students in an effort to test (cross-validate) the replicability of the results obtained in Study 1 with the inclusion of a multiple group sample (Wright et al., 1997). The results of Study 2 further confirmed the findings of Study 1 as it too noted a strong causal link between extended contact and reduced prejudice, not only in white majority group participants but (to a slightly lesser degree) in minority group participants as well (Wright et al., 1997).

The third study observed four distinct 1-day sessions in which participants (12-14 American students, randomly assigned to groups of 6 or 7 students each) were asked to compete as teams for rewards by completing certain tasks (Wright et al., 1997). This led to a marked increase in participants' outgroup prejudice and conflict (Wright et al., 1997). Two randomly selected members of each group were then paired with a member of an opposing group and underwent a relationship-building task, which included the use of self-disclosure (Wright et al., 1997). Following this, these group members were then asked to report on this experience to their respective group members before completing a final group competitive task (Wright et al., 1997). Despite the continued competition between groups, the results of this newly introduced knowledge

regarding positive intergroup interactions between an ingroup and outgroup member was observed to result in a lessening of negative outgroup attitudes (Wright et al., 1997).

The fourth and final study aimed at experimentally testing the extended contact hypothesis by having white American and Asian American undergraduate participants ( $N = 170$ ) undergo a series of tests that they were informed would test similarities (Wright et al., 1997). Based on these tests participants were placed in either the “Blue” or “Green” group, or so participants thought when in actuality they were randomly assigned to these groups (Wright et al., 1997). Participants were then given either a blue or green shirt to denote which group they were placed in and were then asked to observe an interaction between a blue and green group member (confederates; Wright et al., 1997). This interaction between confederates was either positive, middling, or negative in nature (Wright et al., 1997). The results of this study were that participants who observed a positive interaction between the two group confederates had a markedly significant reduction in prejudicial outgroup attitudes when compared to those who observed middling or negative interactions (in the case of the latter an increase in negative outgroup attitudes was often found; Wright et al., 1997).

This research undertaken by Wright et al., (1997) identifies three distinct ways in which extended contact targets prejudice. Firstly, extended contact does not require the observer to engage directly in intergroup contact themselves, and so this indirect exposure aids in reducing any potential intergroup anxiety relating to the anticipation of future intergroup contact (Wright et al., 1997). This notion that extended contact is associated with reduced intergroup anxiety has been noted in follow-up studies (i.e. Paolini, Hewstone, Cairns, & Voci, 2004; Turner, Hewstone, & Voci, 2007). Indeed two studies conducted by Turner, Hewstone, Voci, and Vonofakou (2008), between South Asian and white learners in the United Kingdom, each designed specifically to test the research and findings of Wright et al. (1997), noted that in each study the relationship between extended contact and prejudice was mediated by intergroup anxiety.

Secondly, the opportunity to observe (or learn about) positive intergroup contact between a fellow ingroup member and an outgroup member allows the observer to reassess and alter their understandings of what to expect from future intergroup contact (Wright et al., 1997). In other words, extended contact allows the observer the opportunity for re-evaluating both perceived ingroup and perceived outgroup norms relating to intergroup contact. Using white British students, Turner et al., (2008), tested this notion that extended contact is associated with increased positive

ingroup and outgroup norms relating to contact. In both studies they conducted they found that extended contact, in particular the knowledge/observation of an instance of direct intergroup contact where an ingroup member was treated positively by an outgroup member, did in fact lead to participants re-evaluating (positively) their perceived norms in regards to what to expect in instance of direct intergroup contact (Turner et al., 2008). Similarly, Gómez, Tropp, and Fernández (2011) found that extended contact amongst Spanish natives and immigrants in Spain helped to positively shape Spanish participant expectancies relating to instances of direct intergroup contact with immigrants, thereby preparing participants for their own future direct intergroup contact.

Thirdly, observing a fellow ingroup member engaging in positive intergroup contact with an outgroup member (or becoming aware of such positive intergroup interactions) is capable of breaking down the distinction between ‘us’ and ‘them’ and increasing the perceived overlap between the ingroup and the outgroup. This is especially true when the fellow ingroup member being observed is someone that the ingroup observer relates to (and trusts), such as an ingroup friend. This phenomenon can be described by the idiom that the (outgroup) friend of my (ingroup) friend is also my friend. An example to support this notion can be found in the research conducted by Cameron, Rutland, Brown, and Douch (2006), in which 5 to 11-year-old children (N = 253) were read stories that centred on positive friendships between an ingroup and outgroup (refugees) member. The results of this study found that participants in the extended contact condition showed significantly more positive outgroup attitudes when compared to the control group, and that these extended contact effects were significantly mediated by the inclusion of the other (outgroup) in the self (i.e. a greater level of self-other overlap; Cameron et al., 2006).

### ***The psychological keystones of extended contact.***

To understand the psychological dynamics that may explain the impact that observing (or coming to know of) positive ingroup contact between an ingroup friend and an outgroup member on the observer’s own intergroup attitudes, it is necessary to explore some of the fundamental psychological principles associated with interpersonal friendships. These include Baumeister and Leary’s (1995) belongingness hypothesis, Aron et al.’s. (2001) self-expansion model, Bandura’s (1977) social learning theory, and Heider’s (1958) balance theory.



Interpersonal friendships can be understood as a “highly flexible, dynamic, multidimensional process, the structure and functioning of which will vary depending on the characteristics of the individuals involved, the environmental context, and the developmental stage of the friendship” (Hays, 1988, p.391). Baumeister and Leary (1995) suggest that we all as human-beings house within us an innate desire to seek out and develop at least some degree of interpersonal relationships, and that we are driven to sate this desire through regular positive instances of contact with other individuals. This desire forms the basis of what is dubbed the ‘belongingness hypothesis’ (Baumeister & Leary, 1995). The belongingness hypothesis states that we particularly desire contact that allows for a reciprocal concern to form between ourselves and other individuals regarding each other’s desires and well-being (Baumeister & Leary, 1995). It bears noting that the belongingness hypothesis relates specifically to the desire to form social connections itself, and that interpersonal friendships serve as a means to fulfil this desire (Baumeister & Leary, 1995).

Aron et al.’s (2001) self-expansion model suggests that one seeks to preserve relationships out of a desire to strengthen one’s own sense of self-efficacy. Through the perception of our own similarity with other individuals we begin to incorporate others into our perception of ourselves (Hays, 1988). This process allows for one to gain access to both social and physical resources, as well as aids in developing one’s own interpersonal skills, which itself further serves to aid us in our daily interactions. The strength of intimacy within these relationships was found by Fehr (2004) to be related to emotional expression, unconditional support (including emotional support and loyalty), nonsexual contact, reciprocal appreciation as well as happiness and trust. Fehr (2004) further discovered that across a multitude of contexts the process of sharing information of a personal nature with another individual (self-disclosure) was one of the key basic elements needed for friendships to develop and as such the level of self-disclosure in a friendship often predicted the level of intimacy perceived within the friendship. The level of self-disclosure within a friendship was further found to be impacted to some extent by an individual’s subjective values, the prevalent cultural norms in which the contact takes places, and statistically even one’s sex, with females generally being found to be more readily open to self-disclosure (Fehr, 2004). Together, these findings suggest that individuals are more willing to internalise the new ideas, worldviews, and experiences of close friends (Pettigrew & Tropp, 2008; Tausch, Hewstone, Schmid, Hughes, & Cairns 2011).

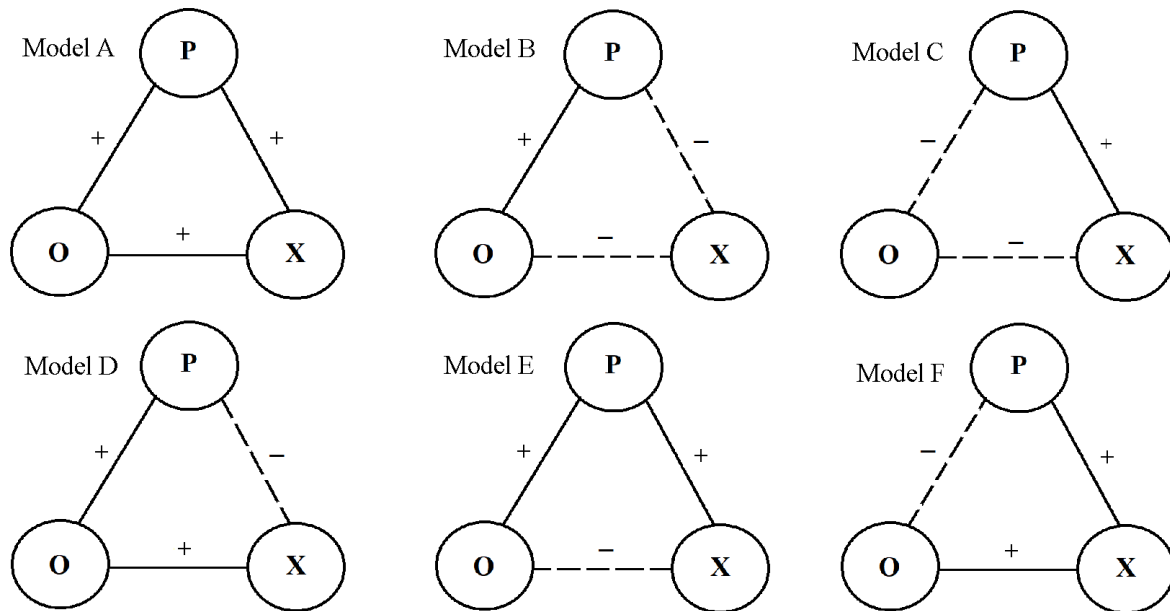


These findings also suggest that interpersonal friendships can function as a means for the re-appraisal of once held attitudes regarding one's ingroup and the attitude perceived to be held by the ingroup towards the outgroup. As such, one's own attitudes towards an outgroup and its members are seen to be directly impacted by those attitudes held by individuals who are considered as friends. Therefore, it follows that should an individual undergo an instance of positive intergroup contact, thereby decreasing their own prejudicial attitudes towards the outgroup and its members in accordance with the principles of the contact hypothesis, that this opens the door, as it were, for the individual's ingroup friends to do the same as they note the positive change in their friend's outgroup attitudes.

This notion of changing attitudes to fit those held by others we trust and care for, which underpins the extended contact hypothesis, fits neatly within the framework of two widely accepted psychological theories. The first of these theories is that of Albert Bandura's (1977) social learning theory, which proposes that individuals acquire and model their own behaviours, attitudes and emotions through the observation of other individuals. The degree to which we model ourselves after others is greater in instances where we share contextual similarities (i.e., being part of the same ingroup) and mutual trust (as promoted and fostered in friendships; Bandura, 1977). Bandura (1977), similar to Wright et al. (1997), proposed that the observation of others helps to lower an individual's fear and anxiety regarding the participation in what they previously self-evaluated as an intimidating task or action, or may lower an individual's fear or anxiety regarding an attitude or worldview previously regarded as threatening to the self. By observing the positive interactions of others, an individual's own sense of self-efficacy is increased (Bandura, 1977). Relative to intergroup contact, then, an ingroup individual in an instance of direct intergroup contact acts as an ingroup representative, and their experiences and actions within this setting inform any observers (without directly having to undergo such contact themselves) as to what to expect from similar scenarios and indeed how to behave and feel within such contexts.

Heider's (1958) balance theory provides a second theoretical lens through which one can garner a greater understanding of the psychological processes underlying the extended contact hypothesis. Balance theory describes that attitude change is driven primarily through a desire for cognitive consistency (where related entities function in harmony), and that any experience of cognitive dissonance (the discomfort experienced when one holds two or more conflicting

principles, values or ideas as being equally true) prompts a change in one's attitudes to restore the desired consistency (Heider, 1958). This theory, which can be reduced to a form of internal calculation, is perhaps best explained through the use of the visual aid below (see Figure 1).



*Figure 1: The p-o-x model of balance theory illustrating balanced (a - c) and unbalanced (d - f) triads (adapted from Heider, 1958).*

The figures above illustrate variations of both balanced and unbalanced triads. Balanced triads are characterised by cognitive consistency. For example, in Model A there are positive (+) attitude links between P, O and X. Similarly, in Model B where there is a positive attitudes link between P and O both of which each share negative attitude links to X. In each instance, the triad between P, O, and X is characterised by consistency. Unbalanced triads, on the other hand, are characterised by cognitive inconsistency (or dissonance). For example, in Model D where P and O have a positive attitude link yet where O's link to X is positive P's link to X is negative. Similarly, in Model E where P has positive attitude links to both X and O yet the link between O and X is itself negative. Heider (1958) argues that our need for cognitive consistency will necessitate that the individual change one of their attitudes in order to restore consistency to the triad. So, for example, using Model D, Heider's (1958) balance theory posits that in order to rectify this sense of cognitive dissonance, that the P individual in this example would feel, they would be

left with three possible attitude changes they can make. Either P can; change their attitudes regarding object X to be positive, or change their attitudes regarding other individual O to be negative, or they could conclude that O cannot truly have positive attitudes towards X. Which attitude the P individual changes is ultimately up to them, however, balance theory states that P would calculate the possible effects each change in attitude may bring about and generally choose the option which would require the least amount of perceived effort (Heider, 1958).

The P-O-X model describing balance theory can be employed to illustrate the potential of extended contact for reducing prejudice. Ingroup member 'O' is friends with fellow ingroup member 'P'. As such, ingroup member 'O' holds positive attitudes towards fellow ingroup member 'P'. Let us assume for the purposes of illustration that ingroup member 'O' holds negative attitudes towards the outgroup represented by outgroup member 'X', and therefore also holds negative attitudes towards outgroup member 'X'. Let us further assume that ingroup member 'P' has positive intergroup contact with outgroup member 'X' and (as per the contact hypothesis) holds positive attitudes towards outgroup member 'X'. If ingroup member 'O' observes (or comes to learn of) the positive contact between fellow ingroup member 'P' and outgroup member 'X', then this configuration described above would yield an unbalanced triad similar to that illustrated in model E (see Figure 1 above). According to Heider's (1958) balance theory, ingroup member 'O' will desire resolving this imbalance. Balance can be achieved if ingroup member 'O' changes their positive attitude towards fellow ingroup member 'P' to a negative attitude (see model C in Figure 1 above). However, balance could also be achieved if ingroup member 'O' changes their negative attitude towards outgroup member 'X' to a positive attitude (see model A in Figure 1 above). It is this latter change in attitudes towards the outgroup, brought about by observing (or learning of) the positive contact between a fellow ingroup member and an outgroup member, that is described by the extended contact hypothesis. Specifically, according to the extended contact hypothesis, if ingroup member 'O' observes, or even has knowledge of, a fellow ingroup member 'P' having positive intergroup contact with outgroup member 'X', it will encourage more positive attitudes towards outgroup member 'X' (and the outgroup as a whole) for ingroup member 'O'. The likelihood that ingroup member 'O' would choose to restore cognitive consistency by changing their attitudes towards outgroup member 'X' instead of changing their attitudes towards fellow ingroup member 'P' should be increased if there is a close relationship between 'O' and 'P' (such as in the case between close friends).

These promising results prompted a litany of researchers further exploring and putting the extended contact hypothesis through numerous tests and studies of their own. For instance, Liebkind and McAlister (1999) conducted research in which Finnish school children discussed real-life events and stories regarding friendships between Finnish citizens and foreigners. The students exposed to this study were found to have a reduction in their prejudicial attitudes towards foreigners when compared to a control group (Liebkind & McAlister, 1999). Likewise, a study conducted by Cameron and Rutland (2006), in which school children were read stories regarding cross-group friendships between abled and disabled citizens, reported a similar reduction in prejudicial attitudes towards the disabled. Indeed, since its inception the extended contact hypothesis has received substantial empirical support across a multitude of studies and contexts (see Eller, Abrams, & Gomez, 2012; Turner et al., 2008).

It bears noting however, that while extended contact has sometimes been found to produce a slightly less statistically significant reduction in prejudicial attitudes, when compared to direct contact, the true importance and potential of the extended contact hypothesis lies in the fact that, unlike direct contact, it is not continually reliant on structured instances of face-to-face contact (Wright et al., 1997). Therefore, extended contact is particularly useful in contexts where direct contact instances are limited, or where there are notably high levels of self-segregation or contact anxiety (Eller et al., 2012; Turner et al., 2008). Indeed, Christ, Tausch, Hewstone, Wagner, Hughes, and Cairns (2010), demonstrated this notion in their research, which noted extended contact as being a stronger predictor of increased positive outgroup attitudes, when compared to direct contact, for participants with little to no prior instances of contact with outgroup members, such as those living in segregated communities. Similarly, Andrighetto, Mari, Volpato, and Behluli, (2012) conducted research testing the ability of extended contact to better relations between Albanians and Serbians in the post conflict self-segregated nation of Kosovo. The researchers noted that given the historical and recent conflict between these groups and the resulting tendency for self-segregation, extended contact often functioned as the only means of contact between these groups (Andrighetto et al., 2012). The results of this study showed that through the use of extended contact, intergroup trust was promoted and intergroup prejudice reduced between groups (Andrighetto et al., 2012). Indeed, the researchers noted that the use of extended contact also functioned to prime group members for further intergroup contact through reducing participant anxiety regarding such contact (Andrighetto et al., 2012).

A narrative review of extended contact literature conducted by Vezzali et al. (2014) further confirms this assertion that extended contact holds particular relevance in post-conflict contexts categorised by heightened intergroup tensions and noted avoidance behaviours regarding intergroup contact. Vezzali et al. (2014) highlights the potential extended contact has in; reducing intergroup anxiety (both within the contact instance and regarding future intergroup contact), and promoting cross-group friendships. Furthermore, they note that extended contact does not require direct contact with an outgroup member and is therefore more readily accepted (than direct contact instances, due to this noted reduced situational anxiety) and more feasibly implemented (in instances where direct contact is limited) in post-conflict scenarios (Vezzali et al., 2014). Indeed, they go on to further note that extended contact has been shown to improve cognitive outgroup attitudes, which include a reduced desire for intergroup social distancing (Vezzali et al., 2014). Zhou et al. (2019), reaffirms this notion through their meta-analysis of 248 studies relating to the past 20 years of extended contact research across a host of differing contexts. Zhou et al. (2019), note that the multiple forms and variations extended/indirect contact can take can be tailored to specific contexts with unique/varying requirements, making extended contact the primary choice in intergroup post-conflict contexts. Most interestingly, their findings also noted that extended contact was found to be very effective in instances where group divides are racially or ethnically based (Zhou et al., 2019).

### **Mediators of the Contact-Prejudice Relationship**

Intergroup contact research over the past twenty years has shifted its focus from whether intergroup contact reliably reduces prejudice (a question conclusively answered by the comprehensive meta-analysis undertaken by Pettigrew and Tropp, 2006), towards exploring how positive intergroup contact reduces prejudice. To this end, a number of potential mediators of the contact-prejudice relationship have been put forward and examined (for reviews see Brown & Hewstone, 2005; Hewstone & Swart, 2011; Hodson et al., 2013; Pettigrew & Tropp, 2008). Establishing the mediators of the contact-prejudice relationship is vital in order to develop effective interventions aimed at lowering intergroup prejudice, tailored for contextual relevance. The two most relevant potential mediators in the contact-prejudice relationship within the context of the present study are those of intergroup anxiety and self-disclosure.

### **Intergroup anxiety.**

Advances in intergroup contact theory over the past twenty years have confirmed that one of the key routes through which intergroup contact is capable of reducing prejudice is via the reduction of intergroup anxiety (Pettigrew & Tropp, 2008). Intergroup anxiety refers to the feelings of anxiety produced in an individual prior to, and during, instances of intergroup contact (Stephan & Stephan, 1985, Stephan et al., 1999; Swart et al., 2010, 2011). These feelings of anxiety may encourage individuals to avoid intergroup contact, or may predispose individuals to interpreting such contact negatively (Plant, 2004; Swart et al., 2010).

Pettigrew and Tropp (2008) suggest that positive intergroup contact reduces anxiety through exposure and the normalisation of intergroup contact experiences, which itself promotes more confidence for individuals to engage in such contact. Research into the mediating role of intergroup anxiety has been shown to support this notion (see Stephan & Stephan, 1985, Stephan et al., 1999; Swart et al., 2010, 2011). For instance, two studies conducted in Italy by Voci and Hewstone (2003) explored attitudes held by Italian students (Study 1; N = 310) and hospital workers (Study 2; N = 94) towards immigrants. Voci and Hewstone (2003) found that while positive instances of intergroup contact did reliably promote positive attitudes towards immigrants, this direct relationship was significantly mediated by reduced intergroup anxiety.

One of the most common antecedents of intergroup anxiety is a lack of prior instances of positive intergroup contact, as well as a tendency for self-segregation into homogenised living spaces (Plant & Devine, 2003). As previously discussed, South Africa's differing ethnic groups have displayed a noted propensity for homogenised living spaces, such as same-group neighbourhoods and schools, and have similarly displayed a general avoidance of social intergroup contact when possible (Alexander, 2003; Dixon et al., 2008). This tendency for the avoidance of intergroup contact has similarly been observed in South African universities (Finchilescu et al., 2007). Therefore, when examined through the theoretical lens of contact theory, South Africa's noted high levels of ethnic intergroup conflict and anxiety can be attributed largely to intergroup anxiety and the avoidance behaviours it promotes (Dixon et al., 2008; Schensul & Heller, 2011).

Extended contact offers an important means for overcoming the effect that intergroup anxiety has on reducing the willingness for direct intergroup contact in post-conflict societies such

as South Africa. The benefits of extended contact do not rely on the experience of direct, personal intergroup contact with outgroup members. Rather, observing (or coming to learn of) fellow ingroup members engaging in positive intergroup contact with the outgroup is capable of reducing intergroup anxiety towards intergroup contact in the observer (Vezzali et al., 2014; Wright et al., 1997). For instance, Paolini et al. (2004) conducted two cross-sectional studies that tested the effects of extended contact between Catholics and Protestants in Northern Ireland. In both studies it was found that the relationship between extended contact and prejudice was mediated by intergroup anxiety. Similarly, in their first three studies, Turner et al. (2007) found that the effects of both direct and, more importantly, extended forms of contact were mediated by intergroup anxiety.

Importantly, extended contact, and the concomitant reduction in intergroup anxiety, is capable of encouraging the uptake of direct contact with the outgroup. For example, Mazziotta, Mummendey, and Wright (2011) conducted two experiments between German and Chinese students in a German university to test, amongst other things, if extended contact (such as observation) predicted a greater readiness to engage in direct contact with the outgroup. The results of both their experiments revealed that the observation of a direct contact scenario (extended contact) did indeed leave participants reporting a reduction in anxiety relating to future direct contact with the outgroup and with an increased willingness to undergo such contact themselves (Mazziotta et al., 2011). In a similar vein, Mallett and Wilson (2010) conducted two studies amongst white American university students aimed at correcting negative expectations regarding intergroup contact and increasing inter-racial friendships. In these studies participants were asked to observe an inter-racial friendship between two outgroup members (Study 1) and an inter-racial friendship between an ingroup and outgroup member (Study 2), and to write about whether they had similar experiences or not (Mallett & Wilson, 2010). In both these studies it was found that participants who engaged with these tasks were found to have a marked increase in their own number of inter-racial friendships and relationships (Mallett & Wilson, 2010). This therefore suggests, once more, that positive extended contact predicts future direct contact.

### **Self-disclosure.**

Self-disclosure can be defined as the voluntary process of disclosing personal information to another individual and is viewed as an integral aspect of interpersonal friendships (Miller, 2002).



Self-disclosure has been suggested as playing a pivotal role in the promotion of positive attitudes between group members in instances of intergroup contact. An individual who receives self-disclosed information from another individual is then themselves more likely to view the discloser more favourably and will be more predisposed to the self-disclosure of their own personal information (Berg & Wright-Buckley, 1988; Worthy, Gary, & Kahn, 1969). Furthermore, the establishment of a rapport based on mutual trust/risk (i.e., sharing of personal information) prompts those individuals involved to engage in the evaluation and re-appraisal of their stereotypical beliefs regarding the outgroup (Brewer & Gaertner, 2001; Reis & Shaver, 1988).

It follows, therefore, that this process of self-disclosure operates as a mediator in the relationship between intergroup contact and prejudice. Indeed, research conducted by Tam et al. (2006) supports this notion. In their research, in which 77 British university students were asked a series of questions relating to their contact with their grandparents (given the noted levels of ageism in U.K.), it was found that both the perceived quality and quantity of contact with the grandparents were related to self-disclosure (Tam et al., 2006). Furthermore, Tam et al. (2006) noted that self-disclosure mediated the relationship between contact and both anxiety and empathy with grandparents, and that anxiety and empathy mediated the effects of self-disclosure on attitudes regarding the elderly. Put simply this suggests that self-disclosure heavily mediates the relationship between intergroup contact and prejudice and indeed anxiety and empathy in instances of intergroup contact. Similarly, self-disclosure between in- and outgroup members aids in reciprocal trust building. Turner et al. (2007, Study 1), in their cross-sectional study, discovered that the British participants' willingness for self-disclosure in instances of contact with South Asian friends was found to positively predict intergroup trust and attitudes towards South Asians.

The experience of self-disclosure in the context of intergroup contact allows individuals to feel more confident in predicting the outgroup's actions and intent in future instances of intergroup contact (e.g., Kerr, Stattin & Trost, 1999). This perceived ability to predict such outgroup actions further allows for the lessening of anxiety surrounding future contact and promotes intergroup trust. It should follow, then, that observing the successful self-disclosure between an ingroup friend and an outgroup member should similarly enhance confidence in predicting the outgroup's actions and intent, and improve attitudes towards the outgroup. This is something the present study aimed to explore – whether the observation of self-disclosure promoted more positive outgroup attitudes.



The promotion of self-disclosure within instances of intergroup contact may be specifically relevant in post-conflict societies (such as post-Apartheid South Africa), which are characterised by high levels of intergroup mistrust (IJR, 2013). However, as is often the case, groups in post-conflict contexts may be predisposed to avoid contact or, due to geographical and other such restrictions, instances of intergroup contact may be difficult to orchestrate. Such contexts may benefit from a recent, exciting advancement in intergroup contact theory, namely the secondary transfer of contact effects.

### **Advances in Contact Theory: The Secondary Transfer Effect**

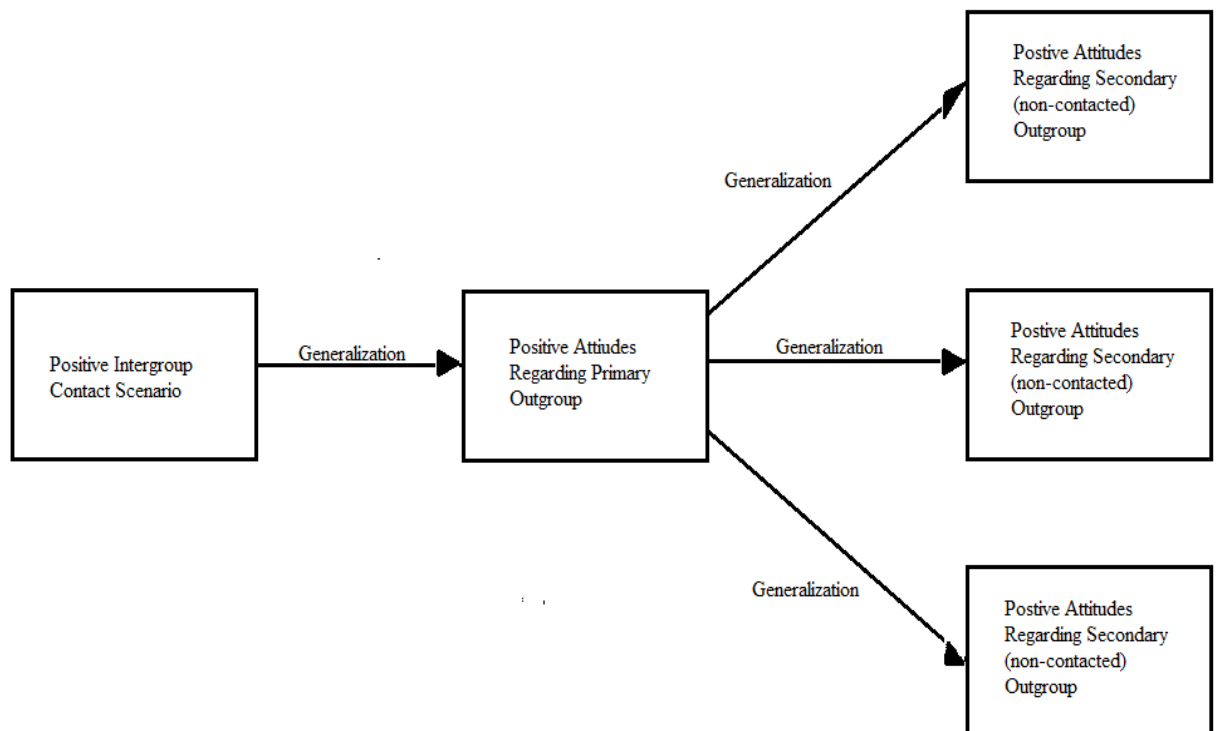
A key concern for policy makers involved in promoting more positive intergroup attitudes relates to the ability of the benefits of positive intergroup contact to generalise beyond the contact situation, beyond the outgroup member encountered, and beyond the outgroup involved in the contact setting. The practical utility of intergroup contact as a means for promoting improved intergroup relations more broadly would be limited if what was required that individuals needed to encounter members of all possible outgroups in order to shape their attitudes towards those groups. This limitation offers an important critique for the practical utility of intergroup contact. However, the most recent advances in the contact literature offer a challenge to this critique.

Contact researchers have observed that the benefits of positive intergroup contact extend far wider than originally thought. For instance, Pettigrew (1997), using European survey data, found that individuals who reported having one or more friends from one particular outgroup were often found to hold generally less prejudicial attitudes across a range of outgroups. Most interestingly, these outgroups were often not found within the respondent's own country and therefore these respondents had received little to no exposure to these other outgroups (Pettigrew, 1997). Similarly, a longitudinal study conducted by Van Laar et al. (2005) found that having a roommate of one ethnic outgroup acted as a predictor of not only decreased prejudicial attitudes towards that outgroup, but also to other, non-contacted ethnic outgroups.

Inspired by such findings, Pettigrew (2009) offered the first systematic investigation of the generalization of positive intergroup contact effects across outgroups. In his seminal review, Pettigrew (2009) noted overwhelmingly strong longitudinal and experimental evidence that

suggested that the primary reduction in prejudice towards the outgroup involved in an instance of intergroup contact can prompt a secondary reduction in prejudice towards outgroups not involved in this original instance of intergroup contact. Most interestingly, Pettigrew (2009) noted that these secondary effects of contact were limited to secondary non-contacted outgroups that were subjectively similar to primary contacted outgroup in perceived stereotypes, status or stigma. Together, this research established the foundation of what has becoming known as the secondary transfer effect (STE) of intergroup contact.

The STE of intergroup contact describes the phenomenon whereby positive intergroup contact with a member of one outgroup (known as the primary outgroup) not only improves attitudes towards the primary outgroup in general, but also improves attitudes towards a variety of other outgroups that the ingroup member might have very little (or no) intergroup contact with (known as secondary outgroups). The STE is illustrated in Figure 2 below.



*Figure 2: The secondary transfer effect of intergroup contact (adapted from Lolliot et al., 2013).*

Since Pettigrew's (2009) formal introduction of the STE to the contact literature, a growing body of literature has confirmed the existence of the STE and established it as a legitimate phenomenon (for a review see Lolliot et al., 2013). However, in Pettigrew's (2009) research he notes that while he found undeniable evidence for the existence of the STE, he could only speculate as to why and how it takes place. The most common explanation for why and how the STE works, in more recent the contact literature, is that of attitude generalization.

### **Attitude generalisation and the secondary transfer effect.**

Attitude generalisation refers to the well-established psychological process through which our attitudes regarding one object (e.g., a group, person, or idea) are generalised so as to be similar to attitudes regarding other (similar) objects (see Shook, Fazio, & Eiser, 2007; Stark, Flache, & Veenstra, 2013; Tausch et al., 2010). Attitude generalisation has been shown to take place across a multitude of domains, such as objects within computer games, attitudes towards consumer products, and of course our evaluations of other individuals (Tausch et al., 2010). The degree to which our attitudes are generalised between these concepts has been linked to our own subjective perceptions as to the similarities between them (Pettigrew, 2009; Tausch et al., 2010). The more subjectively similar the objects appear to us the more generalised our attitudes will be between them. This understanding of attitude generalisation is widely known and accepted within the psychological community at large.

Interestingly, Allport (1954) himself alluded to this notion of attitude generalisation in his own research regarding intergroup relations. Allport (1954) cited a particular 1946 study conducted by researcher E. L. Harley in which participants were questioned as to their attitudes towards thirty-five real-life nations and ethnic groups and three fictional ethnic groups. In this study participants were not made aware that three of the groups were fictitious. Despite never having heard of, or come into contact with, many of these groups (least of all the three fictitious ones), participants nevertheless displayed significant correlations between their attitudes towards the various groups, including the three fictitious groups (Allport 1954). These findings were rather alarming as they suggested that participants attributed prejudicial attitudes to unencountered (indeed non-existent) groups through a process of attitude generalisation with other known outgroups (Allport 1954). As pessimistic as these finding may seem at first, they do allow for one to question if the reverse is also true. Namely, if one were to lower an individual's prejudicial

attitudes towards one outgroup, will this decrease be generalised to other outgroups, which said individual perceives as being similar in nature? With this question in mind research began to explore this potential aspect of attitude generalisation and soon a growing body of literature began to form, providing evidence for the generalisation of attitudes brought about through positive instances of intergroup contact.

A series of cross-sectional studies conducted across three differing geographical contexts (Cyprus, Northern Ireland, and America) by Tausch et al. (2010) discovered that in each case participant attitudes regarding the primary outgroup acted as a mediator in the relationship between contact with the primary outgroup and attitudes towards secondary outgroups. These studies hold particular relevance as their results were obtained even when prior contact with the secondary outgroup was controlled for (see Lolliot et al., 2013; Schmid, Hewstone, Küpper, Zick, & Wagner, 2012).

Indeed, further support for attitude generalisation's role in the STE can be found when one tests if the reverse is also true. The 'reverse' secondary transfer effect of contact tests whether improved attitudes towards a secondary outgroup generalises to the primary outgroup. Those research studies that employ this reverse STE method, while limited in number, have all found that attitudes towards a secondary outgroup act as a strong mediator in the process of secondary outgroup contact and attitudes regarding the primary outgroup (see Christ et al., 2014; Schmid et al., 2012; Tausch et al., 2010; Vezzali & Giovannini, 2012). Here it is important to clarify the distinction between primary and secondary outgroups, as originally described by Pettigrew (2009). The primary outgroup is any outgroup that an individual has (regular) intergroup contact with, or is more likely to have intergroup contact with. The secondary outgroup is any outgroup that an individual has no (or very limited) intergroup contact with, or is very unlikely to have intergroup contact with. As such, the designation of primary and secondary outgroups is always relative and may differ from context to context.

Evidence supporting the STE via attitude generalisation has also been found in the South African context. De Beer (2015), Daiber, (2017) and Nell (2017) each independently conducted studies amongst South African Stellenbosch University students. De Beer's (2015) research used the data from electronic surveys completed by white South African University students (N = 551), to show that cross-group friendships with coloured South African students (the primary outgroup)

significantly predicted more positive attitudes towards coloured South Africans in general, and that these effects generalised towards black (African) South Africans (secondary outgroup) after controlling for prior contact with the secondary outgroup. Not only do these results provide evidence for the STE of contact, but De Beer (2015) further noted evidence to suggest that this noted STE of contact was achieved through a process of attitude generalisation. Similarly, the findings presented by Daiber (2017), who employed a quantitative cross-sectional design using data collected from online surveys completed by white South African university students ( $N = 866$ ), provided further evidence of the STE of contact. Daiber (2017) noted that cross-group friendships with coloured South Africans (primary outgroup) was significantly associated with reduced anxiety and improved attitudes towards not only coloured South Africans but also towards black (African) South Africans (secondary outgroup). Daiber (2017) also noted that there was found to be strong evidence to support the mediating role of attitude generalisation in this process of the STE of contact (see also Nell, 2017).

Most of the research on the STE has focused on the STE of direct contact, although there is some recent evidence to support the STE of extended contact as well. For example, Vezzali, Stathi, Giovannini, Capozza, and Trifiletti (2015) undertook three studies in which they found that extended (vicarious) contact with a fictional character promoted positive attitudes towards a fictional stigmatized group, and that these positive attitudes then generalized to secondary ‘real-world’ groups. These three studies asked participants to read the extremely popular Harry Potter novels, which can be found in bookshops across the world. Participants in these studies included elementary school children (Study 1;  $N = 34$ ), high-school children (Study 2;  $N = 117$ ) and university students (Study 3;  $N = 71$ ; Vezzali et al., 2015). In each of the three studies it was found that extended contact with one of the novels’ primary characters, Hermione Granger (who belonged to the fictional stigmatized group ‘Mudbloods’), through the narrative eyes of the novels’ protagonist Harry Potter, predicted positively improved attitudes not only regarding the fictitious group ‘Mudbloods’ (primary outgroup) but also towards stigmatized secondary ‘real-life’ outgroups such as immigrants (Study 1), homosexuals (Study 2), and refugees (Study 3; Vezzali et al., 2015). The growing body literature demonstrating the operation of the STE of contact via attitude generalisation has led many researchers to support this conception of the role of attitude generalisation (see; Harwood, Paolini, Joyce, Rubin & Arroyo, 2011; Lolliot et al., 2013; Lolliot,

Schmid, Hewstone, Swart & Tausch, 2011; Pettigrew, 2009; Schmid et al., 2012; Tausch et al., 2010).

These findings are promising, yet there remains a gap in experimental longitudinal research regarding extended contact, the STE of contact, and attitude generalization, particularly within a South African context. One notable exception comes in the form of research conducted by Openshaw (2015). Openshaw (2015) undertook a longitudinal experimental study amongst white female (same-sex) friend groups within Stellenbosch University, in which positive direct and extended contact with a black (African) South African female confederate was experimentally manipulated. She found that in both scenarios of direct and extended contact, the reduction of prejudice amongst participants towards the primary outgroup (black (African) South African students) was transferred, to a lesser degree, towards a secondary outgroup (Indian students). The results of Openshaw's (2015) experimental study are promising, however, the sample size used was relatively small ( $N = 58$  across two experimental conditions and a control condition). The present study, therefore, aimed to both act as a theoretical extension of such existing research, as well as to add to the still notable gap in literature regarding the applicability of extended intergroup contact and the STE in a post-conflict South African context.

### **Alternative explanations for the STE.**

Tausch et al. (2010) identified three potential threats to the validity of the STE, each offering an alternative explanation for the observed generalisation of attitudes across outgroups. These include (1) prior contact with the secondary outgroup, (2) response bias and social desirability, and (3) the causal sequencing problem. In relation to the first alternative explanation, it is possible that respondents who report having more contact with a primary outgroup may very well also have similar prior contact with secondary outgroups. Therefore, it cannot be conclusively ruled out that the generalisation of attitudes towards the secondary outgroups is not simply due to the effects of prior contact with the secondary outgroups. Indeed, given the philosophical principle of Occam's razor (that the simplest explanation is usually the correct one) it would seem far more likely that the already noted effect of intergroup contact would explain respondent attitudes to the secondary outgroup rather than some newly proposed and relatively unproven (at the time) theory regarding a generalisation of contact effects.

The second alternative explanation for the STE highlighted by Tausch et al. (2010) is linked to response bias and social desirability. Individuals have a tendency to want to avoid negative social judgement or punishment and therefore it is possible that respondents answering questions relating to the primary and secondary outgroups are responding in what they deem as a socially desirable manner, indicating more positive primary and secondary outgroup attitudes.

The third alternative explanation for the STE relates to the challenge of inferring causal relationships from cross-sectional data. The majority of early studies on the STE were cross-sectional in nature, and thus not suited for exploring the causal relationship between primary outgroup attitudes and secondary outgroup attitudes. Overcoming this threat to the validity of STE results would require either experimental or longitudinal research designs.

Tausch et al. (2010) undertook a series of studies to test each of these alternative explanations of the STE. These included three cross-sectional studies in Cyprus (N = 1,653), Northern Ireland (N = 1,973), and the USA (N = 275), and a longitudinal study in Northern Ireland (N = 411). The first study undertaken by Tausch et al., (2010) examined contact between Greek and Turkish Cypriots, who have had a history of intergroup conflict and mistrust, and if such contact affects attitudes regarding both mainland Turkish and Greek citizens respectively. The results of this study showed support for the STE via attitude generalisation, as contact between Greek and Turkish Cypriots (primary outgroups) not only led to a markedly positive improvement in outgroup attitudes but this effect of contact was found also to be generalised to mainland Greek and Turkish citizens (secondary outgroups; Tausch et al., 2010). However, much like the STE studies before it, this cross-sectional study by Tausch et al. (2010, Study 1) did not control for prior direct contact with the secondary outgroup (the secondary contact problem) or for “the causal sequence problem” (Tausch et al., 2010).

These issues were somewhat addressed in the second study, which dealt with intergroup relations in Northern Ireland between ethno-religious Catholic and Protestant groups (primary outgroups) and the effects that positive contact between these two groups have on attitudes towards racial minority groups (secondary outgroups) in Northern Ireland (Tausch et al., 2010). Unlike in the previous study, this study did control for prior secondary group contact (Tausch et al., 2010). Similar to the previous study, however, this second study observed that contact between the primary outgroup not only improved outgroup attitudes between them but these effects further

generalized to attitudes towards the secondary outgroups (Tausch et al., 2010). This second study provided more evidence for the STE with evidence suggesting this process took place via attitude generalization and ingroup reappraisal (Tausch et al., 2010).

The third study conducted by Tausch et al. (2010) controlled for socially desirable responses from participants. This third study examined white and African American university students' cross-group friendships with Hispanics (primary outgroups) and the effects such friendships can have on participant attitudes regarding Vietnamese/Indian groups (secondary outgroups; Tausch et al., 2010). Again, similar to the previous studies, this third study found evidence of the STE of intergroup contact via attitude generalisation as it was found that the number of close Hispanic friendships participants had significantly predicted more positive attitudes towards not only Hispanics in general but also towards Vietnamese/Indian groups (Tausch et al., 2010).

The fourth and final study conducted by Tausch et al. (2010) once again examined intergroup contact in Northern Ireland between Catholics and Protestants (primary outgroups) and the effects this contact had on attitudes regarding racial minority groups in Ireland (secondary outgroups; Tausch et al., 2010). In this instance the study controlled for prior secondary outgroup contact and made use of a two-wave longitudinal design to address the causal sequence problem (Tausch et al., 2010). It was found that contact between Irish Catholic and Protestant groups promoted positive outgroup attitudes between these groups and this effect generalized to participant attitudes towards the secondary outgroups (racial minority groups) over time (Tausch et al., 2010). The overall results of these four studies indicated that, consistent with the STE, contact with a primary outgroup predicted attitudes towards secondary outgroups, even when controlling for contact with the secondary outgroup, socially desirable responding, and prior attitudes (Tausch et al., 2010).

### **Benefits of Intergroup Contact and the STE in Post-Conflict Societies**

Research over the past ten years has shown that positive direct and extended intergroup contact with members of one outgroup not only promotes more positive attitudes towards that outgroup, but can also broadly promote more positive attitudes towards other (secondary)



outgroups not involved in the original contact experience (Harwood et al., 2011; Lolliot et al., 2013; Pettigrew, 2009; Schmid et al., 2012; Tausch et al., 2010). As such, the emerging evidence suggests that the STE of contact is capable of addressing one of the more common criticisms of contact; that contact effects may be limited to the outgroups that are encountered.

Such findings led many researchers to surmise that contact-theory based interventions may hold particular relevancy in post-conflict nations. Initially this notion received some skepticism as it was believed that contact in such settings would only serve to inflame intergroup tensions (e.g., Allport, 1954; Amir, 1969), owing to the fact that post-conflict nations are characterized by heightened intergroup tensions and mistrust, which often results in the formation of stringently homogenized societies and intergroup contact avoidance behaviours (Habte & Wagaw, 1993; Plant & Devine, 2003; Schensul & Heller, 2011). As such, intergroup attitudes in such contexts are often regarded as highly intolerant and rigid in nature (Hodson, 2011).

However, a review of contact literature in such contexts, conducted by Hodson (2011), found that highly ideologically intolerant individuals still benefit from the promotion of positive intergroup attitudes spurred by intergroup contact (particularly extended contact), and often more so than their more tolerant counterparts. Hodson (2011) noted that intergroup contact in such contexts reliably and effectively reduced intergroup anxiety whilst simultaneously promoting increased empathy, trust, and outgroup closeness (i.e., cross-group friendships).

Northern Ireland is often classed as a post-conflict nation owing in part to their noted historical intergroup conflict between Catholic and Protestant ethno-religious groups (Tam, Hewstone, Kenworthy, & Cairns, 2009). A study conducted by Tam et al. (2009) found instances of direct and extended intergroup contact reliably and efficiently promoted positive attitudes and behavioural tendencies between these ethno-religious groups in Northern Ireland. Furthermore, Tam et al. (2009) found that the promotion of intergroup trust, brought about through instances of positive intergroup contact, predicted positive intergroup behavioural tendencies far more so than any other noted mediators (even positive attitudes regarding the outgroup) in both their first and second study. These findings led Tam et al. (2009) to suggest that interventions informed by contact theory may well hold relevance in other similar post-conflict settings elsewhere.

Indonesia similarly struggles with negative intergroup attitudes regarding interreligious contact between majority Christian and minority Muslim population (Kanas, Scheepers, & Sterkens, 2015). These intergroup tensions and conflict have led many to class Indonesia as a post-conflict nation (Kanas et al., 2015). Yet, similar to the findings reported by Tam et al. (2009) in Northern Ireland, Kanas et al. (2015) found that intergroup contact interventions (including both direct and extended contact) informed by contact theory produced a noteworthy increase in positive intergroup attitudes.

Intergroup contact has also been shown to positively improve intergroup attitudes in post-conflict nations where group divisions are not denoted by religious affiliation or beliefs. Okyere-kwakye, Nor, Soehod, and Zaitul (2019) posit that Ghana provides an interesting setting in which to test the effects of intergroup contact and the STE, given its multi-tribal context. Okyere-kwakye et al. (2019) found that equal status, co-operation, and common goals predicted an increase in positive attitudes regarding the contacted outgroup and similar secondary outgroups.

While each of these studies above were undertaken in vastly different contexts and amongst a range of different groups, they all seem to suggest that intergroup contact (especially extended contact) holds particular potential and relevancy (and generalisability with the STE) within post-conflict nations. There are still, however, relatively few longitudinal and/or experimental studies that have been undertaken regarding the STE in general (see for example, Eller & Abrams, 2004; Harwood et al., 2011; Openshaw, 2015; Pettigrew, 2009; Tausch et al., 2010), while there is a very limited, but growing body of research on the STE in the South African context (see Daiber, 2017; De Beer, 2015; Nell, 2017; Openshaw, 2015; Swart, 2008).

## **Chapter Summary**

The literature reviewed in this chapter offers an overview of the development of the contact hypothesis into a bone fide theory, and highlights the recent advances in the contact literature relating to the secondary transfer effect of intergroup contact. It has been clearly established, through numerous studies, that positive instances of intergroup contact do reliably produce improved intergroup attitudes. Furthermore, it has been shown that this improvement in attitudes generalises across a range of outgroups. While there are certain conditions that have been found

to strengthen the contact-prejudice relationship, such as equal group status, shared group goals, intergroup cooperation and such contact being supported through the relevant laws, authorities and societal customs, these conditions are by no means essential.

The literature review has also described the forms intergroup contact can take, principally that of direct and extended contact. These two forms of contact were furthermore shown to differ in the strength of the intergroup prejudice reduction they bring about, with direct contact often producing a stronger reduction. However, these forms of contact were also shown to have differing strengths in their practical implementation, with extended contact not being continually reliant on constant physical contact and therefore showing increased practical potential in situational contexts characterised by homogenised communities and heightened intergroup anxiety and mistrust.

Recent advances in contact theory, such as the exploration of the role of extended contact and the discovery of the STE, have unlocked a potential for this reduction of intergroup prejudice to generalise outside the confines of the direct contact scenario itself to individuals not involved in the original contact scenario and, indeed, across groups (see Lolliot et al., 2013). These advances in the field highlight the theoretical tools and understandings through which to examine and explore intergroup contact as a potential catalyst for intergroup prejudice reduction on a grander scale. With societies (such as South Africa) becoming increasingly more diverse (or super-diverse; Vertovec, 2007) over time, the need for an effective means for generalised prejudice reduction is as important as ever.

Finally, the literature review has identified a number of important gaps in the literature that the present study aimed to address. These include (1) the limited number of South African studies exploring the STE; (2) the limited number of studies that have explored the STE of extended contact; and (3) the limited number of studies that have explored the STE in general, and the STE of extended contact in particular, using a longitudinal experimental design.

## **CHAPTER THREE**

### **THE SECONDARY TRANSFER EFFECT OF EXTENDED CONTACT: AN EXPERIMENTAL STUDY**

Positive intergroup contact has been shown to reliably reduce prejudice (Pettigrew & Tropp, 2006). Moreover, even extended contact (the observation or knowledge of positive intergroup contact between ingroup and outgroup members) can reduce prejudice (Wright et al., 1997). Extended contact may be particularly effective in post-conflict contexts where instances of direct intergroup contact remains limited (such as in South Africa). Recent evidence shows that the positive effects of contact may be broader than initially thought, and that positive intergroup contact is capable of bringing about improved attitudes not only regarding the contacted outgroup, but also towards other secondary ('non-contacted') outgroups (the STE of intergroup contact; see Pettigrew, 2009).

South African society remains largely segregated at the neighbourhood- and school-level, offering limited opportunities for direct contact. However, South African universities may very well provide one of the first instances of regular and required intergroup contact for many South Africans. As such, given contact theory's established validity and potential in a variety of studies and contexts, it should be considered the most appropriate theoretical framework for examining and addressing the nature of intergroup relations within Stellenbosch University. A better understanding of contact theory, along with extended contact and the STE, could aid in improving intergroup relations at SU through the implementation of policies or interventions informed by contact theory. While there is a growing body of literature supporting the STE for direct contact, most notably via the process of attitude generalisation, there is very limited evidence for the STE for extended contact (but see Openshaw, 2015), a gap the present study aimed to address.

#### **The Present Study**

The present study aimed to build on the emerging body of South African evidence supporting the STE of direct intergroup contact via attitude generalisation (see Daiber, 2017; De

Beer, 2015; Nell, 2017; Swart, 2008) by investigating whether the STE via attitude generalisation can also be observed for individuals experiencing extended contact – specifically, for individuals who have observed a positive intergroup contact experience between a fellow ingroup member and the member of one outgroup. More specifically, the present study aimed to experimentally examine if extended contact with a primary outgroup female confederate (a black (African) South African) predicts more positive attitudes and greater trust towards black (African) South Africans in general amongst white South African female participants, and whether such positive attitudes and increased trust towards black (African) South Africans in general generalise to include more positive attitudes and greater trust towards a secondary outgroup not involved in the observed contact setting (Indian South Africans).

The rationale behind the selection of these two outgroups was twofold. Firstly, their selection was based on Stellenbosch University's diversity metrics (Stellenbosch University, 2017), which positioned both black (African) South African students, and to a greater degree, Indian South African students as contextual minority ethnic groups (with white South African students constituting the majority ethnic group). Secondly, as the current number of black (African) South African students was notably higher than that of Indian South African Students it could be assumed that white South African participants were far more likely to have had instances of prior contact with black (African) South African students on campus than Indian South African students, making Indian South African students ideal for the 'non-contacted' secondary outgroup.

## **Methodology and Experimental Procedure**

The present study employed a longitudinal experimental design to test the STE that is similar in nature to the design employed by Openshaw (2015). The present study focusing on the STE of extended contact forms part of a broader research project on the STE of direct and extended contact undertaken under the supervision of Dr Hermann Swart at the Department of Psychology at Stellenbosch University (REC-2019-8840; See Appendix A). Both the Psychology Department of Stellenbosch and Stellenbosch University Library were approached and provided permission to make use of the relevant venues for the present study.

This broader study comprised three waves of data collection using same-sex (female) friendship pairs of white South African students at Stellenbosch University. Participants were recruited to the study in friendship pairs (i.e., white female South African students were encouraged to participate in the study with their closest same-gender ingroup friend). The Division of Institutional Research and Planning provided Institutional permission for the researcher to approach Stellenbosch University students to participate in the proposed study (see Appendix A). Friendship pairs were randomly assigned to either the experimental (direct or extended contact) condition or the control (no contact) condition. Within the experimental condition the friendship pairs were further randomly divided into either the direct contact condition (engaging in a task with the black (African) South African female confederate directly) or the extended contact condition (observing the direct contact condition). As such, the broader study employed a 3 (type of contact: direct vs. extended vs. control) X 3 (time of measure: baseline vs. post-experiment/control vs. 1-week post-experiment/control) mixed design. The present study, however, which only focuses on the extended contact versus control conditions of the broader project comprises a 2 (type of contact: extended versus control) x 3 (time of measure: baseline vs. post-experimental/control vs. 1-week post-experimental/control) mixed design. For the purposes of greater context and clarity, the full design describing all three contact conditions is described below. This will be followed by a description of the hypotheses and the results pertaining only to the investigative focus of the present study (namely a comparison of the extended contact and control conditions).

Participants were recruited using class/tutorial announcements and email (see Appendix B) to participate in ‘a study on friendship formation’. As the present study dealt with such sensitive topics as ethnic intergroup relations, there was a potential for response bias. Therefore, to control for this potential bias, participants were not informed as to the full research aims of the proposed study until after the final survey has been completed. Prospective participants were invited (via email; see Appendix B) in their friendship pairs to a meeting with the researcher to discuss the study in a little more detail. Subsequent to receiving further information on the study, during this initial meeting, participants were provided with two identical copies of an informed consent form to read and sign (see Appendix C) along with a non-disclosure agreement, requesting that they do not share any information relating to the study with any other students for the duration of the study (see Appendix D). The contact details for both the research team members and the Stellenbosch

University Centre for Student Counselling and Development were provided to participants in these consent forms. The reason for providing participants with two identical consent forms was to allow for the research team and the participants to each respectively keep one copy for ease of reference should the need have arisen. Furthermore, prior to participants signing the confidentiality agreement, the researcher clearly and thoroughly explained to all participants that the purpose of the confidentiality agreement was to avoid the possibility of tainting other participants' experience prior to their completion of the study. Furthermore, all participants were informed in this first meeting with the researcher that their participation in the proposed study was entirely voluntary and that they were free to withdraw from the study at any point with no negative repercussions to themselves. Participants were also informed that their participation in the proposed study would be kept confidential by all researchers involved, and that their data would be stored securely (in a locked filing cabinet) and published anonymously with each participant receiving a unique identifier for their data set.

Participants were then asked to complete the first survey comprising the baseline (Time 1) measures of intergroup contact, intergroup attitudes and intergroup trust towards black (African) and Indian South Africans (see Appendix E). These measures are described in further detail below. After completing this first (baseline) survey, a second meeting was scheduled with the students to take place exactly seven days later, where they would engage in a task (either the experimental manipulation of contact or the control task).

One week after the completion of the baseline survey, participants returned to the Department of Psychology where they were met by the researcher and instructed on the task they needed to complete. Prior to their participation in the task, participants were asked to complete a measure of pre-task anxiety (see Appendix F). Friendship pairs that were randomly assigned to the control condition engaged in a task where they were each given a set series of five questions about their friend in the friendship pair that they had to answer individually to explore how well they knew one another (see Appendix G). While it may have been logistically more sound to have the control group participants undergo no task and simply fill out the second survey, the decision to have them undergo a contact session between themselves in their respective pairs was made in an attempt to control for the possibility that any observed effects in the study could be a function of merely having contact of any nature irrespective of ethnicity. Participants in the friendship pairs

that were randomly assigned to the experimental condition were further randomly assigned to either the direct contact condition or the extended contact condition. Participants in the direct contact condition engaged in a closeness induction task (adapted from Sedikides, Campbell, Reeder, & Elliot, 1999; See Appendix H) with a female black (African) South African confederate. The closeness induction task comprised three sets of questions (of increasing intimacy) to facilitate the participant and the confederate getting to know one another. The direct contact participant and the confederate spent one minute asking one another questions from the first set of questions, three minutes asking one another questions from the second set of questions, and five minutes asking one another questions from the third set of questions. Unbeknown to the participant in the direct contact condition, this interaction with the confederate was being livestreamed on a closed-circuit loop to a nearby office where the participant in the extended contact condition was observing and listening to the interaction on a laptop <sup>1</sup>.

At the conclusion of the task, participants across all conditions completed a post-task anxiety measure that was identical to that of the pre-task anxiety measure (see Appendix F). Participants then immediately completed the second survey comprising of measures of attitudes and trust towards black (African) and Indian South Africans in general (see Appendix I and Appendix J). In the experimental condition participants also answered a series of questions relating to their impression of the closeness induction task and their attitude towards the black (African) South African confederate (whom they believed was a naïve participant in the study). After completing the second survey, participants in the experimental condition were debriefed vis-à-vis the fact that the participant in the extended contact condition had listened in on and observed the interaction between their (direct contact condition) friend and the confederate. It should be noted that participants were not informed at this time that the black (African) South African participant was in fact a confederate. After the rationale for this deception was explained to participants (that knowing that one is being observed by others has a way of influencing one's natural behaviour, and that the study required the interaction between the two participants getting to know one another

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<sup>1</sup> A female black (African) South African Stellenbosch University student was employed as a confederate for the present study and received R3000 as remuneration for her involvement. The confederate received training in both the Closeness Induction Task and the finer details regarding their role in the experimental manipulation. This training was necessary to ensure that the confederate was able to contribute to a positive intergroup encounter in the direct contact condition, and to ensure that the confederate was able to achieve a suitable degree of consistency in their behaviour in the manipulation of the direct contact manipulation.



to be as relaxed and as authentic as possible), participants were reminded of their rights to withdraw from the study if they wished to. No participant exercised this right and all participants expressed understanding and agreement with the necessity of the deception. Finally, participants were asked to share what they believed the research was looking to test. No participants successfully inferred the true nature of the study.

At the conclusion of this second meeting, a third and final meeting was scheduled with participants to take place exactly seven days later. At this third meeting the participants completed a third survey comprising measures of their attitudes towards black (African) and Indian South Africans (1-week post-task; see Appendix K). After completing this survey, all participants were debriefed on the hypotheses of the research, and participants in the experimental condition were further debriefed about the use of a confederate. Once again, all participants were reminded of their right to withdraw from the study and none chose to do so. All participants who completed the study received a R20 voucher to be spent at the Student Union.

## **Measures**

Participants each completed three main surveys during the course of this study: at baseline (Time 1, one week prior to the experimental/control task), immediately after the experimental/control task (Time 2), and one week after the experimental/control task (Time 3). The composition of each of these main surveys are described briefly below (for more detailed information on the measures and their items, please refer to Appendices E, I/J, and K). In order to match the surveys for each participant while ensuring participant anonymity, participants were asked to create a unique code by combining the last four digits of their student number and the day (dd) of their birth (e.g. 082219). Participants included this code on each of their surveys, which was then used to match their surveys over time.

### **Baseline survey.**

The baseline survey was administered to all participants immediately after they had signed informed consent to participate in the study. This survey comprised of biographical questions relating to the participants and the nature of their friendship with one another, as well as a range

of measures exploring their intergroup contact with, and various attitudes towards, black (African) and Indian South Africans. It was expected that this first, 130-item, survey would take participants up to 30 minutes to complete and during the study this was indeed found to be the case. The biographical questions along with the primary<sup>2</sup> constructs of interest found in this first survey completed by participants at Time 1 will now be discussed in greater detail.

***Demographics.*** Participants were asked to indicate their age, home language, nationality, ethnicity, year of study at Stellenbosch University, form of accommodation (i.e., university residence, or living off-campus) and their field of study. Participants were also asked to describe their friendship type (i.e., acquaintance, friends, close friends, or romantic partner), friendship length (years and months) and perceived friendship ‘closeness’ (through the selection of a visual representation of seven pairs of circles that differed in how much they overlapped with one another).

***Cross-group friendships with black (African) and Indian South Africans.*** A single-item measure of cross-group friendships was included to measure cross-group friendships with both black (African) and Indian South Africans at Stellenbosch University (adapted from Openshaw, 2015). For each outgroup, participants were asked “How many of your friends at Stellenbosch University are black (African) South Africans / Indian South Africans” (each scaled from 0 = *None* to 6 = *All*).

***Quantity of contact with black (African) and Indian South African cross-group friends.*** A three-item measure (adapted from Openshaw, 2015), asked participants how often they spent time with their black (African) South African friends (i.e. their own living space; each scaled from 0 = *Never* to 6 = *Daily*). The same three items were reworded to measure quantity of contact with Indian South African friends.

***Extended contact with black (African) and Indian South Africans.*** A two-item measure of extended contact (adapted from Openshaw, 2015) asked participants “How many of your close white South African friends have friends who are black (African) South Africans” and “How many

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<sup>2</sup> Note that as the present study forms part of a larger research study, certain questions within these surveys have no bearing within the present study’s own research focus. As such only those measures that directly relate to the present study will be discussed. However, in the interest of clarity and contextualisation, the full surveys (in the form in which they were presented to participants) can be found in Appendices E, I/J, and K.

of your family members have friends who are black (African) South Africans” (both scaled from 0 = *None* to 6 = *All*). The same two items were adapted to measure extended contact with Indian South Africans.

***Quantity of contact with black (African) and Indian South Africans.*** A single-item measure (adapted from Openshaw, 2015) asked participants “How frequently do you have direct, face-to-face interactions with students from each of the following groups at Stellenbosch University?” (scaled from 0 = *None* to 6 = *Daily*). The groups students were required to provide an assessment of included black (African) and Indian South Africans.

***Quality of contact with black (African) and Indian South Africans.*** A two-item measure (adapted from Openshaw, 2015) asked participants “How pleasant or unpleasant would you rate your direct, face-to-face interactions with black (African) South African students at Stellenbosch University” (scaled from 1 = *Very unpleasant* to 5 = *Very pleasant*), and “How positive or negative would you rate your direct, face-to-face interactions with black (African) South Africans at Stellenbosch University” (scaled from 1 = *Very positive* to 5 = *Very negative*). These two items were reworded to measure quality of contact with Indian South African students at Stellenbosch University.

***Attitudes towards black (African) and Indian South Africans.*** Attitudes towards black (African) and Indian South Africans were each measured using a single-item feeling thermometer (adapted from: Nelson, 2008; Openshaw, 2015). Participants were asked to “Make a clear mark on each thermometer to indicate the position (as accurately as possible) of where your feelings towards the specific group lies” (scaled from 0 = *Cold/Negative/Unfavourable* to 100 = *Warm/Positive/Favourable*).

***Trust towards black (African) and Indian South Africans.*** Outgroup trust towards black (African) and Indian South Africans in general was measured using three items (adapted from Openshaw, 2015). For example, participants were provided statements such as “I cannot trust black (African) South Africans” (each scaled from 1 = *Strongly disagree* to 7 = *Strongly agree*).

***Strength of attitudes towards black (African) and Indian South Africans.*** A one-item measure was used to measure participant certainty regarding the opinion expressed regarding both black (African) and Indian South Africans in general (created specifically for the purposes of the

present study). Participants were asked “How certain are you in your opinions about black (African) South Africans” (scaled from 1 = *Extremely uncertain* to 6 = *Extremely certain*). This question was reworded to measure attitude strength towards Indian South Africans.

### **Pre- and post-task anxiety.**

Participants in the direct and extended contact experimental conditions were asked to complete a six-item measure of their state anxiety both immediately prior to and immediately after the experimental task. Participants were asked to rate their overall anxiety in relation to their feeling threatened, anxious, comfortable, awkward, safe and at ease (each scaled from 1 = *Not at all* to 7 = *Extremely*). Individual items were scored and rescored so that higher scores reflected greater anxiety.

### **Post-task survey.**

All participants completed measures assessing their attitudes and trust towards black (African) and Indian South Africans in general immediately after the experimental (or control) task (Time 2). Additionally, participants in the experimental condition were asked a series of questions relating to their experience of the experimental manipulation and their attitudes towards the black (African) South African confederate (who they were led to believe was a naïve participant). In this second survey participants were again presented with the same biographical/demographic questions as those included in the previous baseline survey (Time 1). This was purposefully done to further prime participants to the intergroup nature of the survey questions. Indeed, many of measures used in the second survey were identical to those employed in the baseline survey. Therefore, in the interest of avoiding unnecessary repetition, only those measures that were newly introduced through this second survey will be discussed in greater detail.

This second survey saw the inclusion of four additional primary constructs of interest. It bears noting that these newly included measures were purposefully not presented to participants in the control condition (having not undergone experimental manipulation), but rather only to those participants in the experimental (extended) condition.

**Task success.** A one-item measure was used to measure task success (adapted from Openshaw, 2015). Participants in the direct contact condition were asked if “The conversation they

just had in the task is a good way to get to know somebody” (scaled from 1 = *Completely disagree* to 5 = *Completely agree*). Participants in the extended contact condition were asked if “The conversation they just observed was a good way to get to know somebody” (scaled from 1 = *Completely disagree* to 5 = *Completely agree*).

***Reciprocal self-disclosure.*** A one-item measure was used to measure the level of reciprocal self-disclosure experienced (in the direct contact condition) or observed (in the extended contact condition) in the closeness induction task (adapted from Openshaw, 2015). Participants in the direct contact condition were asked “When you think about the conversation you just had as a whole (and the information that you shared and that the other participant shared), to what extent do you think the conversation you just had was of a personal/private nature” (scaled from 1 = *Not at all personal/private* to 5 = *Extremely personal/private*). Participants in the extended contact condition were asked “When you think about the conversation you just observed as a whole (and the information that your friend shared and that the other participant shared), to what extent do you think the conversation you just observed was of a personal/private nature” (scaled from 1 = *Not at all personal/private* to 5 = *Extremely personal/private*).

***Category salience.*** A three-item measure was used to measure perceived category salience (adapted from Openshaw, 2015). Participants in the direct contact condition were asked questions such as “To what extent did you feel as if you were acting/behaving as a typical member of the white South African community during the conversation” (scaled from 1 = *Not at all* to 5 = *Completely*). Participants in the extended contact condition were asked questions such as “To what extent did you feel as if your friend was acting/behaving as a typical member of the white South African community during the conversation” (scaled from 1 = *Not at all* to 5 = *Completely*).

***Attitude towards the confederate.*** A single-item feeling thermometer (adapted from: Nelson, 2008; Openshaw, 2015) was used to measure participant attitudes towards the confederate in particular. Specifically, participants were asked to “Make a clear mark on the red line in the thermometer to indicate the position (as accurately as possible) of where your feelings towards the other participant lies” (scaled from 0 = *Cold/Negative/Unfavourable* to 100 = *Warm/Positive/Favourable*).

### **One-week post-task survey.**

All participants completed measures assessing their attitudes and trust towards black (African) and Indian South Africans in general one week after the experimental (or control) task. These measures were identical to those employed in the baseline survey for these two constructs. Once more, in the interest of further priming participants to the intergroup nature of the survey questions, the decision was made to again include the same biographical/demographic questions as those included in the previous baseline survey (Time 1).

### **Hypotheses**

The present study focused only on the putative STE of extended contact amongst white South African students, and only the hypotheses relevant to this line of enquiry are provided here. The hypotheses relating to the STE of direct contact amongst white South African students are tested as part of the M.A. (Psychology) thesis being undertaken by Ms Simone Strydom. Four hypotheses were tested in the present study for participants in the extended contact condition.

**Hypothesis 1a:** in line with the extended contact hypothesis, participants in the extended contact condition will show significantly more positive attitudes towards black (African) South Africans in general at Time 2 and Time 3 (relative to their baseline score) after observing a positive interaction between a fellow ingroup member and a black (African) South African.

**Hypothesis 1b:** in line with the extended contact hypothesis, participants in the extended contact condition will display significantly more positive attitudes towards black (African) South Africans at Time 2 and Time 3 than participants in the control (no contact) condition.

**Hypothesis 2a:** in line with the extended contact hypothesis, participants in the extended contact condition will show significantly more trust towards black (African) South Africans in general at Time 2 and Time 3 (relative to their baseline score) after observing a positive interaction between a fellow ingroup member and a black (African) South African.

**Hypothesis 2b:** in line with the extended contact hypothesis, participants in the extended contact condition will display significantly more trust towards black (African) South Africans at Time 2 and Time 3 than participants in the control (no contact) condition.

**Hypothesis 3:** in line with the secondary transfer effect, positive changes in attitudes towards black (African) South Africans in general between Time 1 and Time 2 will significantly predict more positive attitudes towards Indian South Africans in general at Time 2 amongst participants in the extended contact condition.

**Hypothesis 4:** in line with the secondary transfer effect, positive changes in trust towards black (African) South Africans in general between Time 1 and Time 2 will significantly predict more trust towards Indian South Africans in general at Time 2 amongst participants in the extended contact condition.

## Results

### Participants

A power statistical power analysis (Cohen, 1988) was conducted to determine the appropriate sample size for the present study. The results of this analysis suggested 31 participants for the experimental condition. However, due to logistical constraints the present study did not reach this number and as such it is important to note that the study is therefore slightly underpowered.

Twenty-five female undergraduate students (one from each of the twenty-five participant friendship pairs) were assigned to the extended contact condition ( $M_{\text{age}} = 19.28$  years,  $SD = 1.10$ ). Six of these students indicated English as their first- (home) language and nineteen students indicated Afrikaans as their first- (home) language. These students averaged 1.88 years ( $SD = 0.88$ ) as students at Stellenbosch University. The data provided by these participants regarding friendship closeness ( $M = 5.44$ ,  $SD = 1.26$ ), friendship type ( $M = 4.00$ ,  $SD = 1.04$ ), and friendship length ( $M_{\text{months}} = 52.08$ ,  $SD_{\text{months}} = 57.80$ ) confirmed that their friendship with the participant assigned to the direct contact condition (who they observed interacting with the confederate) was a close (intimate) friendship rather than a casual acquaintance.

Twelve female participants (from six friendship pairs) were assigned to the control (no contact) condition ( $M_{\text{age}} = 20.50$  years,  $SD = 1.62$ ). Eight of these students indicated English as their first- (home) language, three students indicated Afrikaans as their first- (home) language, and one student indicated that they were bilingual in English and Afrikaans as their first- (home) language. These students averaged 3.00 years ( $SD = 1.35$ ) as students at Stellenbosch University. The data provided by these participants regarding friendship closeness ( $M = 5.92$ ,  $SD = 0.99$ ), friendship type ( $M = 4.08$ ,  $SD = 0.52$ ), and friendship length ( $M_{\text{months}} = 31.25$ ,  $SD_{\text{months}} = 18.84$ ) confirmed that their friendship with the friend in their friendship pair was a close (intimate) friendship rather than a casual acquaintance.

### **Preliminary Analyses**

Preliminary data analyses were conducted using the Statistical Package for the Social Sciences (SPSS). Multivariate data analytic procedures were used in the analysis of the data (including exploratory factor analysis, within- and between-subjects univariate and multivariate analysis of variance). The distribution of mean scores for each of the key variables relating to the hypotheses under investigation was explored for participants in each condition. The acceptable range for skewness (-2.00 to +2.00) and kurtosis (-7.00 to +7.00) suggested by West, Finch, and Curran (1995) were used to assess the normality of distribution of the mean scores in each condition. These analyses confirmed that the mean scores were sufficiently normally distributed in both the control condition ( $M_{\text{Skewness}} = -0.64$ ,  $SD_{\text{Skewness}} = 0.75$ ,  $\text{Min}_{\text{Skewness}} = -2.01$ ,  $\text{Max}_{\text{Skewness}} = 0.82$ ;  $M_{\text{Kurtosis}} = 0.36$ ,  $SD_{\text{Kurtosis}} = 1.65$ ,  $\text{Min}_{\text{Kurtosis}} = -1.61$ ,  $\text{Max}_{\text{Kurtosis}} = 4.80$ ) and the extended contact condition ( $M_{\text{Skewness}} = -0.35$ ,  $SD_{\text{Skewness}} = 0.62$ ,  $\text{Min}_{\text{Skewness}} = -1.06$ ,  $\text{Max}_{\text{Skewness}} = 1.09$ ;  $M_{\text{Kurtosis}} = -0.26$ ,  $SD_{\text{Kurtosis}} = 0.69$ ,  $\text{Min}_{\text{Kurtosis}} = -1.21$ ,  $\text{Max}_{\text{Kurtosis}} = 0.86$ ) to allow for the parametric analyses that followed.

A multivariate analysis of variance (MANOVA) was run to investigate whether the participants assigned to the control and the extended contact conditions were statistically comparable to one another along the variables measured at Time 1. These included the demographic variables (age, home language, and years of study at Stellenbosch University) and the key variables relating to the main hypotheses of this research (direct contact with black



(African) and Indian South Africans, and measures of positive attitudes and trust towards black (African) and Indian South Africans). Results showed that there were no overall multivariate differences across the two conditions (Pillai's Trace = .28,  $F(10, 23) = 0.91$ ,  $p = .54$ ,  $\eta^2_{\text{partial}} = .28$ ). An inspection of the univariate statistics showed that participants in the control condition were significantly older ( $M = 20.55$ ,  $SD = 1.70$ ) than participants in the extended contact condition ( $M = 19.28$ ,  $SD = 1.10$ ;  $F(1,34) = 10.67$ ,  $p = .019$ ), and that participants in the control condition had been at university longer ( $M = 3.00$ ,  $SD = 1.41$ ) than participants in the extended contact condition ( $M = 1.88$ ,  $SD = 0.88$ ;  $F(1,33) = 8.10$ ,  $p = .012$ ). However, there were no significant univariate differences between participants in these two conditions on any of the key variables relating to the hypotheses under investigation (all  $p$ 's > .26). The means, standard deviations, and reliability estimates for each of the key variables under investigation are summarised in Table 1 below.

Finally, a one-sample  $t$ -test was undertaken to explore whether participants in the extended contact condition experienced the experimental manipulation of interpersonal closeness they observed as a successful way for getting to know someone, and whether the experimental manipulation successfully stimulated a positive attitude towards the black (African) South African confederate. These analyses confirm that the mean score for task success ( $M = 3.96$ ,  $SD = .50$ ) deviated significantly from the scale mid-point (which was 3.00;  $t(22) = 9.21$ ,  $p < .001$ ), and that the mean attitude score towards the black (African) South African confederate ( $M = 90.52$ ,  $SD = 7.67$ ) deviated significantly from the scale mid-point (which was 50.00;  $t(22) = 25.32$ ,  $p < .001$ ). These findings suggest that participants in the extended contact condition considered the closeness induction task to be a successful means of getting to know someone, and that the closeness-induction task they observed lead to significantly positive attitudes towards the confederate.

Table 1: Means, Standard Deviations, and Reliability Estimates for Each Key Variable Under Investigation

Condition	Variable	Mean (SD)	Reliability
<b>Control (N = 12)</b>	<i>T1 Direct Contact with black (African) South Africans</i>	2.04 (1.50)	.87***†
	<i>T1 Direct Contact with Indian South Africans</i>	0.83 (1.09)	.84***†
	<i>T1 Contact Quality with Indian South Africans</i>	3.95 (0.76)	.54 <sup>a</sup> †
	<i>T1 Attitudes towards black (African) South Africans</i>	62.08 (21.26)	-
	<i>T1 Attitudes towards Indian South Africans</i>	69.17 (13.46)	-
	<i>T1 Trust towards black (African) South Africans</i>	4.69 (1.55)	.92
	<i>T1 Trust towards Indian South Africans</i>	5.58 (1.23)	.87
	<i>T2 Attitudes towards black (African) South Africans</i>	65.67 (19.78)	-
	<i>T2 Attitudes towards Indian South Africans</i>	69.83 (16.81)	-
	<i>T2 Trust towards black (African) South Africans</i>	4.83 (1.36)	.86
	<i>T2 Trust towards Indian South Africans</i>	5.36 (1.08)	.84
	<i>T3 Attitudes towards black (African) South Africans</i>	68.50 (15.71)	-
	<i>T3 Attitudes towards Indian South Africans</i>	72.75 (10.79)	-
	<i>T3 Trust towards black (African) South Africans</i>	4.75 (1.09)	.84
	<i>T3 Trust towards Indian South Africans</i>	5.11 (1.01)	.82
<b>Extended Contact (N = 25)</b>	<i>T1 Direct Contact with black (African) South Africans</i>	1.84 (1.28)	.37 <sup>b</sup> †
	<i>T1 Direct Contact with Indian South Africans</i>	1.16 (1.35)	.67***†
	<i>T1 Contact Quality with Indian South Africans</i>	3.67 (0.70)	.21 <sup>ns</sup> †
	<i>T1 Attitudes towards black (African) South Africans</i>	60.88 (14.10)	-
	<i>T1 Attitudes towards Indian South Africans</i>	65.36 (13.53)	-
	<i>T1 Trust towards black (African) South Africans</i>	4.55 (1.00)	.67
	<i>T1 Trust towards Indian South Africans</i>	5.08 (0.99)	.72
	<i>T2 Attitudes towards black (African) South Africans</i>	66.44 (20.64)	-
	<i>T2 Attitudes towards Indian South Africans</i>	64.48 (19.20)	-
	<i>T2 Trust towards black (African) South Africans</i>	4.31 (1.48)	.82
	<i>T2 Trust towards Indian South Africans</i>	4.73 (1.33)	.82
	<i>T3 Attitudes towards black (African) South Africans</i>	67.72 (17.65)	-
	<i>T3 Attitudes towards Indian South Africans</i>	67.00 (17.55)	-
	<i>T3 Trust towards black (African) South Africans</i>	4.23 (1.49)	.88
	<i>T3 Trust towards Indian South Africans</i>	4.63 (1.46)	.90

Note: All measures of contact anchored at 1 and 5; Single-item attitude measure anchored at 0 and 100; Trust measure anchored at 1 and 7. Higher scores indicate greater contact quantity and quality, more positive outgroup attitudes, and greater outgroup trust. † Pearson's *r* for two-item measures. \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  <sup>a</sup>  $p = .09$   
<sup>b</sup>  $p = .08$

## Main Analyses

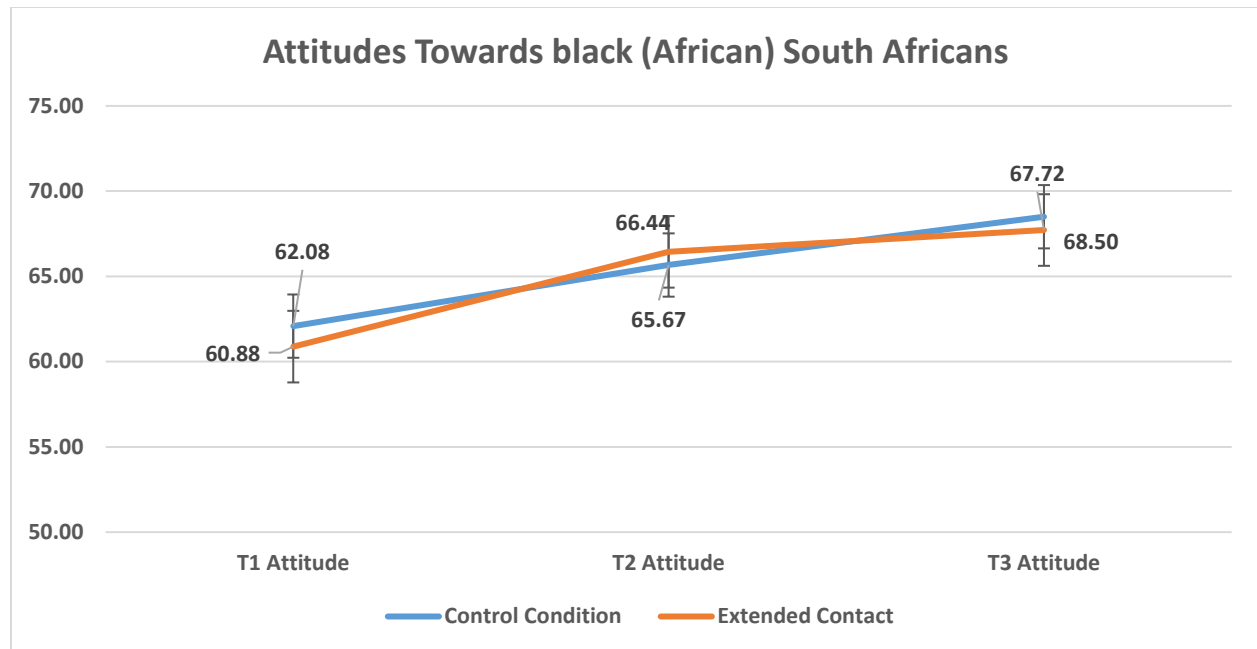
### Attitudes towards black (African) South Africans.

A 3 (Time: Time 1 vs. Time 2 vs. Time 3) by 2 (Condition: Extended vs. Control) mixed factor ANOVA was run, using a Bonferonni correction to explore any within-group changes in attitudes towards black (African) South Africans in general over time, and to compare any possible changes between groups. In these analyses, the first factor (Time) was treated as a within-subject factor and the second factor (Condition) was treated as the between-subjects factor. Direct contact with black (African) South Africans reported at Time 1 was included as a control variable. This analysis did not yield a significant main effect for Time (Pillai's Trace = .15,  $F(2, 33) = 2.80$ ,  $p = .08$ ,  $\eta^2_{\text{partial}} = .15$ ). Moreover, the TimeXCondition interaction effect was also non-significant (Pillai's Trace = .00,  $F(2, 33) = 0.5$ ,  $p = .95$ ,  $\eta^2_{\text{partial}} = .00$ ).

A decomposition of this interaction effect showed that there were no significant differences in attitude scores towards black (African) South Africans across the two conditions at any of the three measurement points (all  $p$ 's > .87). Moreover, although both conditions exhibited an increase in positive attitudes towards black (African) South Africans over time, these increases were non-significant between Time 1 and Time 2, Time 2 and Time 3, and between Time 1 and Time 3 across both conditions (all  $p$ 's > .64). A comparison of the mean attitude scores towards black (African) South Africans across the two conditions over three time points is illustrated in Figure 3 below. These findings therefore do not fully support either Hypothesis 1a or 1b. However, it bears noting that participant attitudes towards black (African) South Africans did shift in the hypothesised direction (positive change).

### Trust towards black (African) South Africans.

These analytic steps were repeated to test whether the experimental manipulation had any effect on the measures of trust towards black (African) South Africans. Therefore, a 3 (Time: Time 1 vs Time 2 vs Time 3) by 2 (Condition: Extended vs Control) mixed factor ANOVA was run, using a Bonferonni correction. Once again, the first factor (Time) was treated as a within-subject factor and the second factor (Condition) was treated as the between-subjects factor. Direct contact



*Figure 3:* Participant attitudes towards black (African) South Africans at time 1, time 2, and time 3.

with black (African) South Africans reported at Time 1 was included as a control variable. Both the main effect for Time (Pillai's Trace = .05,  $F(2, 33) = 0.95$ ,  $p = .40$ ,  $\eta^2_{\text{partial}} = .05$ ), and the TimeXCondition interaction effect (Pillai's Trace = .02,  $F(2, 33) = 0.31$ ,  $p = .74$ ,  $\eta^2_{\text{partial}} = .02$ ) were non-significant.

These non-significant effects show that, firstly, collapsing across the two experimental conditions, trust scores were non-significantly different from one another over the three time points and, secondly, that participants across the two conditions did not exhibit significantly different trust scores relative to one another over time. These findings therefore do not support either Hypothesis 2a or 2b. A comparison of the mean trust scores towards black (African) South Africans across the two conditions over three time points is illustrated in Figure 4 below.

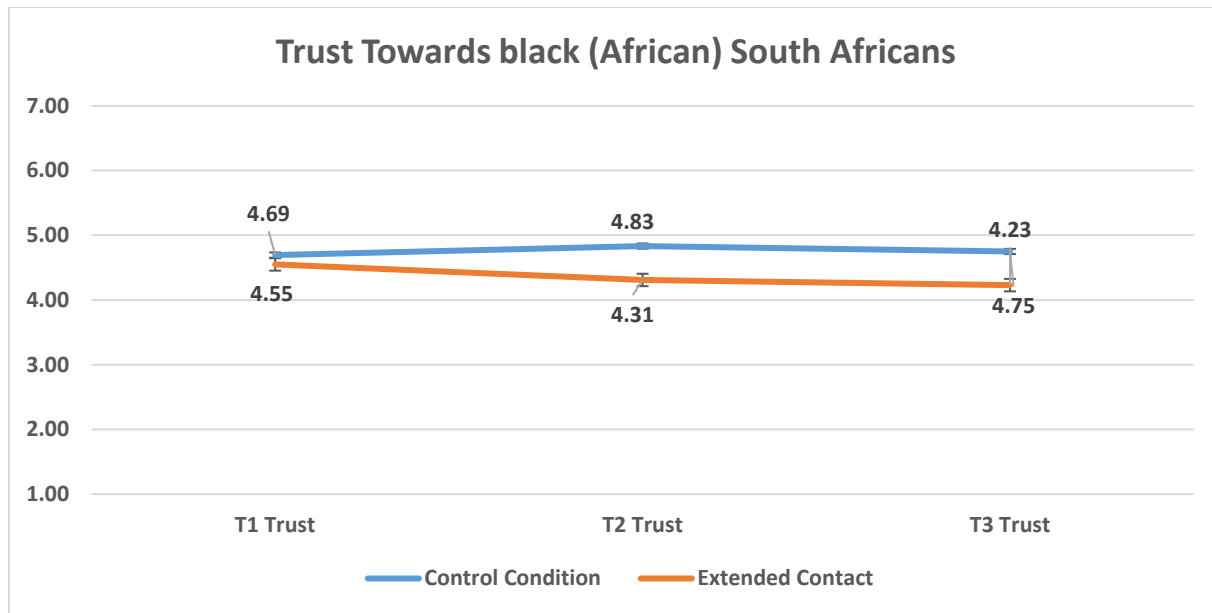
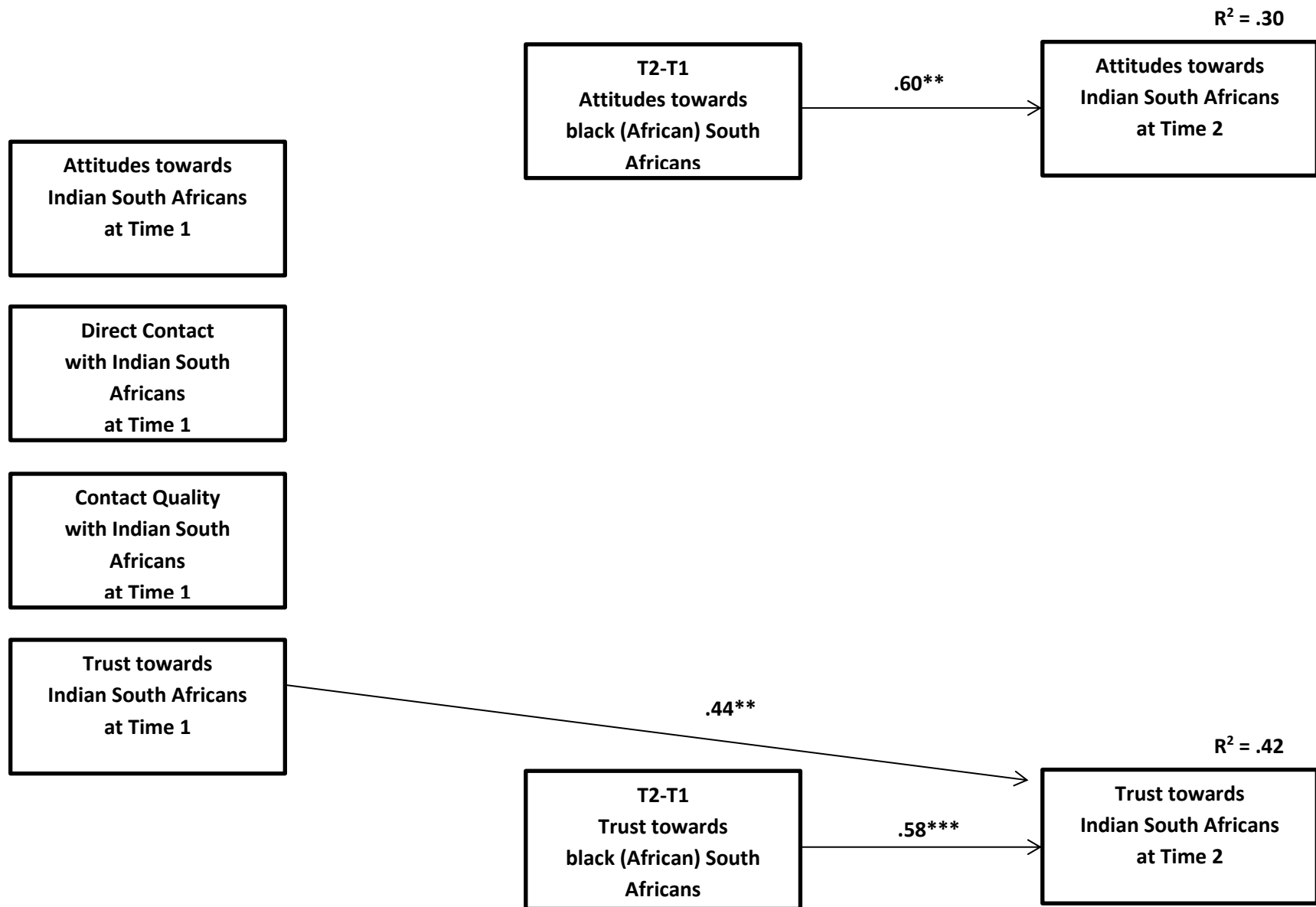


Figure 4: Participant trust towards black (African) South Africans at time 1, time 2, and time 3.

#### **The STE of extended contact.**

A bootstrapped (5,000 resamples) linear regression analysis was run to test whether changes in attitudes towards black (African) South Africans between Time 1 and Time 2 predicted more positive attitudes towards Indian South Africans in general amongst participants in the extended contact condition. Due to the complex nature of these analyses and the relatively small overall sample size ( $N = 25$ ), the decision was made to test the less strict secondary transfer effect between change in Time 1 – Time 2 attitudes/trust towards black (African) South Africans and attitudes/trust towards Indian South Africans at Time 2 (and not Time 3, which would provide a more stringent longitudinal test of STE). Quantity and quality of contact with Indian South Africans reported at Time 1 and attitudes towards Indian South Africans at Time 1 were included as control variables. The results are illustrated in Figure 5 below.



*Figure 5:* The secondary transfer of attitudes and trust towards black (African) South Africans generalising to Indian South Africans in the present study.

A positive change in attitudes towards black (African) South Africans in general from Time 1 to Time 2 significantly predicted more positive attitudes towards Indian South Africans in general at Time 2 ( $B = .60, p = .002, 95\%CI: .18, .73$ ), controlling for prior contact with, and attitudes towards, Indian South Africans. This model explained 30% of the variance in attitudes towards Indian South Africans at Time 2 (see Figure 5 below). These findings therefore provide full support for Hypothesis 3 of the present study.

A similar bootstrapped (5,000 resamples) linear regression analysis was run to test whether changes in trust towards black (African) South Africans between Time 1 and Time 2 predicted more trust towards Indian South Africans in general. Quantity and quality of contact with Indian South Africans reported at Time 1 and trust towards Indian South Africans at Time 1 were included as control variables in this analysis. A positive change in trust towards black (African) South Africans in general from Time 1 to Time 2 significantly predicted more trust towards Indian South Africans in general at Time 2 ( $B = .58, p = .001, 95\%CI: .20, .72$ ), controlling for prior contact with, and trust towards, Indian South Africans. This model explained 42% of the variance in trust towards Indian South Africans at Time 2 (see Figure 5 below). These findings therefore provide full support for Hypothesis 4 of the present study.

## Chapter Summary

The present study explored the secondary transfer effect of extended contact amongst white South African female students at Stellenbosch University using a three-wave longitudinal experimental design. Four broad hypotheses were tested in the course of the present study.

Hypothesis 1a and hypothesis 1b were not strictly supported. Although the change in attitudes and trust towards black (African) South Africans in general observed at Time 2 and Time 3 were in the expected direction, these changes did not achieve statistical significance and did not differ significantly across the extended contact and control conditions. Similarly, hypothesis 2a and hypothesis 2b were also not supported. The changes in trust towards black (African) South Africans across the three time points were found to be not significant, and did not differ significantly across the extended contact and control conditions.

Hypotheses 3 and 4 (relating to the STE of extended contact) were both supported. Positive changes in attitudes towards black (African) South African in general between Time 1 and Time 2 significantly predicted more positive attitudes towards Indian South Africans in general at Time 2, even after controlling for contact with attitudes towards Indian South Africans at Time 1. Similarly,

positive changes in trust towards black (African) South Africans in general between Time 1 and Time 2 significantly predicted more trust towards Indian South Africans in general at Time 2, even after controlling for contact with and trust towards Indian South Africans at Time 1. A more detailed discussion of these results is provided in chapter four below.



## CHAPTER FOUR

### DISCUSSION

The ever-growing body of psychological literature regarding contact theory has firmly established that intergroup contact is key to the promotion of positive intergroup harmony and co-operation (Dovidio et al., 2017; Pettigrew & Tropp, 2006). Furthermore, research into the effectiveness of extended contact (Wright et al., 1997) has highlighted its potential in post-conflict contexts (Vezzali et al., 2014; Zhou et al., 2019). Moreover, recent advances in contact theory have highlighted the potential for the effects of both direct and extended contact to generalise beyond the contact experience with a primary outgroup to include more positive attitudes towards other, ‘non-contacted’ secondary outgroups as well (Lolliot et al., 2013; Tausch et al., 2010).

The present study employed a three-wave longitudinal experimental design to explore the validity and efficacy of extended contact in the promotion of positive intergroup attitudes and trust amongst white female South African students at Stellenbosch university towards black (African) South Africans in general, and whether any such effects of extended contact generalised to include more positive attitudes and greater trust towards a secondary, ‘non-contacted’ outgroup, namely Indian South Africans. Four primary hypotheses were tested within the present study. The first two hypotheses related to the extended contact hypothesis itself – that extended contact with a black (African) South African would predict significantly more positive attitudes and greater trust (respectively) towards black (African) South Africans in general. The final two hypotheses related to the STE of extended contact – that the changes in positive attitudes and trust towards black (African) South Africans in general (subsequent to extended contact) would predict more positive attitudes and greater trust towards Indian South Africans in general.

While the effects observed in relation to the first two hypotheses were in the expected direction, these effects did not achieve significance and so the first two hypotheses were strictly not supported. However, the hypotheses relating to the STE of extended contact were supported; changes in attitudes and trust towards black (African) South Africans from Time 1 to Time 2 predicted significantly more positive attitudes and greater trust (respectively) towards Indian South Africans at Time 2 (controlling for prior contact with, and attitudes and trust towards, Indian South Africans reported at Time 1).

These findings relating to the ability of extended contact to promote more positive intergroup attitudes and intergroup trust, as well as the generalisation of such effects across outgroups, is

discussed in further detail below. This discussion touches on the likely explanations for these findings, as well as contextualising their meaning within the grander body of intergroup contact literature. The discussion concludes with an overview of the limitations of the present study, along with suggestions for future research directions.

### **Improving Outgroup Attitudes via Extended Contact**

The results of the present study, relating to improving outgroup attitudes via extended contact, noted that both experimental (extended) and control conditions exhibited a consistent increase in positive attitudes towards black (African) South Africans over time. However, these increases were non-significant between Time 1 and Time 2, Time 2 and Time 3, and between Time 1 and Time 3 across both conditions. Furthermore, the results showed that there were no significant differences in attitude scores towards black (African) South Africans between the two conditions (extended and control) at any of the three measurement points.

These findings relate to the present study's Hypotheses 1a and 1b. Hypothesis 1a hypothesised that, following the contact session, participants in the extended contact condition will show a statistically significant decrease in prejudicial attitudes regarding the primary outgroup; black (African) South Africans, and its members at Time 2 and Time 3 of the study, when compared to their initial baseline scores at Time 1. These findings therefore provide partial support for Hypothesis 1a, given that extended contact participant attitudes towards black (African) South Africans were noted to shift in the hypothesised direction (positive change). However, the fact that this change in attitudes was found to be statistically non-significant prevents Hypothesis 1a from receiving full support. Hypothesis 1b postulated that extended contact participants would harbour more positive attitudes towards the primary outgroup after having undergone the experimental process (Time 2 and Time 3) when compared to the control group (Hypothesis 1b). Given that the findings of the present study found no such significant difference in attitudes between the two conditions, Hypothesis 1b did not receive support.

The results are, however, somewhat consistent with other research findings relating the effects of extended contact on outgroup attitudes. For instance, Christ et al. (2010) found that while extended contact improved outgroup attitudes, this effect was far less significant in strength when compared to similar effects brought about through direct contact. Similarly, Openshaw (2015) noted in her own research, using an almost identical experimental design and sample group as the present study, that the effect of extended contact on participant outgroup attitudes was far less significant than the effects

of direct contact. Indeed, Eller et al.'s. (2012) research may shed further light on the present study's results, as they noted in their field-based studies that when instances of direct contact were high, extended contact was not found to significantly affect intergroup relations.

There are several possible reasons for why this improvement in attitudes amongst extended contact participants did not achieve significance. Chief among these is the notion that this constant, albeit gradual, positive increase in attitudes would achieve significance were there a larger data pool to draw from (i.e., the present study lacks experimental/statistical power). Furthermore, it bears noting that participants in the extended contact condition were restricted to the observation of a direct contact scenario between a same-sex same-group friend and a black (African) South African confederate. As such, participant attitude changes in the extended contact condition are heavily reliant on the experience and effects brought about within the direct contact scenario, and were these interactions not subjectively evaluated as wholly positive by either the direct or extended participant this would be reflected in the results.

It could also be the case that extended intergroup contact requires more than one observed direct contact instance to reach significance, or that in order to reach significance extended contact effects may require more time than was allowed for in the present study. Again, these findings fall somewhat within the theoretical trends that dictate that any effects of extended contact are often found to be weaker in strength, and can take longer to reach significance, than those of direct contact (Wright et al., 1997). It may be the case that the regular daily instances of direct contact with the primary outgroup (black (African) South Africans) in a university context may have somehow skewed or limited the effectiveness of extended contact (see Eller et al., 2012) despite prior contact being controlled for. Furthermore, while unlikely, it could be argued that universities complicate group salience as participants may prioritize their self-categorisation as 'students' over their ethnic group identification thereby lessening the effects of intergroup contact. These facts may go some way in explaining the lack of statistical significance of changes in outgroup attitudes.

With regards to Hypothesis 1b failing to find support, these results are to be expected given that the effects of extended contact (experimental condition) on participants failed to reach statistical significance. However, this suggests two possibilities: either that control condition participants' attitudes towards the outgroup improved merely by answering the three questionnaires/surveys, or the prior intergroup contact with black (African) South African students on the university campus (be it in classes or shared facilities), during the three week period of experimentation (as prior contact was controlled for), contributed to the very slight improvement in attitudes.

On a practical level, in regards to interventions aimed at improving intergroup relations in South Africa, these results suggest that the promotion of intergroup attitudes through extended intergroup contact may be more difficult to achieve than expected and are perhaps far more reliant on the direct contact instance observed than once thought. Further research is required to determine if this is the case only within South African universities or South Africa in general. Nevertheless, the findings of the present study are encouraging insofar as they suggest that extended contact does in some (albeit non-significant) way improve intergroup attitudes.

### **Promoting Outgroup Trust via Extended Contact**

The results of the present study relating to improving outgroup trust via extended contact showed that both experimental (extended) and control conditions underwent no significant change (positive or negative) in trust towards black (African) South Africans over time. Furthermore, the results showed that there were no significant differences in trust scores towards black (African) South Africans between the two conditions (extended and control) at any of the three measurement points. It was hypothesised that, following the contact session, participants in the extended contact condition would show a statistically significant increase in trust towards black (African) South Africans at Time 2 and Time 3 of the study, when compared to their initial baseline scores at Time 1 (Hypothesis 2a). Furthermore, it was hypothesised that extended contact participants will show significantly more trust towards the primary outgroup after having undergone the experimental process when compared to the control group (Hypothesis 2b).

These non-significant effects highlight that in both cases hypothesis 2a and 2b did not receive support. In fact, these findings show that, firstly, extended contact participants' trust scores, regarding the primary outgroup black (African) South Africans, were non-significantly different from one another over the three time points. Secondly, and perhaps more importantly, these findings show that that participants across the two conditions (extended contact and the control) did not exhibit significantly different trust scores relative to one another over time. While studies have often found that extended contact aids in promoting intergroup trust in post-conflict nations, the findings of the present study seem to suggest that the promotion of trust, through extended contact, within a South African context is harder to obtain than previously thought. Interestingly, these results are in line with Openshaw's (2015) own results, which found no significant increase in participant outgroup trust levels in participants in the extended contact condition.

There are two possible explanations for why this may be the case. Firstly, it has been suggested that multiple positive encounters are required in order to promote intergroup trust (e.g., Rothbart & Park, 1986; Swart, Hewstone, Turner, & Voci, 2011; Turner et al., 2010; Worchel, Cooper, & Goethals, 1991). Indeed, it has been further asserted that in order to attain trust individuals need to perform multiple trustworthy deeds and even then, should this be accomplished, it may take as little as one untrustworthy deed to completely negate this built trust (Rothbart & Park, 1986). This may go some way to explaining the lack of statistically significant increase in trust found in the present study, given that participants in the experimental (extended) group only observed a singular (albeit positive) instance of direct face-to-face contact. Secondly, the fact that extended contact participants did not get to engage in face-to-face contact with the black (African) South African confederate, but simply observed a same-sex same-group friend undergo this interaction, could explain why extended contact participants' trust scores regarding the primary outgroup did not achieve a significant increase. The participants in the extended contact condition were not involved in the reciprocal self-disclosure of personal information (the closeness induction task; Turner et al., 2007). This positions the extended contact participant as an 'outsider' from this interaction, with no vested interest in the interaction, as they are not required to disclose personal information and as such there is no shared risk between themselves and the outgroup member. In specific relation to Hypothesis 2b failing to find support, these results are to be expected given that the effects of extended contact (experimental condition) on participants did not reach statistical significance.

These findings suggest that the promotion of outgroup trust within a post-conflict South Africa with high levels of distrust between groups, requires multiple structured positive face-to-face intergroup contact encounters over an extended length of time. These instances of contact may then aid in the promotion of interpersonal and cross-group friendships, which themselves would presumably further strengthen trust between groups and group members. This seemingly positions intergroup trust as a long-term goal following, rather than preceding, intergroup attitude improvements. This by no means lessens the importance of intergroup trust promotion, however, particularly amongst students (and other young adults) whose attitudes are often more fluid and malleable than other age groups (see Cairns, Leung, Buchanan & Cairns, 1995; Phinney & Chavira, 1992; Turner et al., 2010).

### **The Generalisation of Outgroup Attitudes across Outgroups**

Historically, contact research has primarily focused on the generalisation of contact effects from the outgroup individual to the outgroup as a whole, whilst overlooking the generalisation of

contact effects to other outgroups not involved in the contact situation (secondary transfer effect). This tendency is slowly, but surely, being addressed in the ever-growing body of contact literature. (e.g., Lolliot et al., 2013; Pettigrew, 2009; Tausch et al., 2010). However, even fewer studies have experimentally examined the longitudinal role extended contact plays in the STE (Openshaw, 2015). The present study aimed to fill this theoretical gap by examining the generalisation of attitudes towards a secondary outgroup (Indian South Africans) via positive extended intergroup contact with a primary outgroup (black (African) South Africans).

The results revealed that a positive change in attitudes towards black (African) South Africans in general from prior to the experimental manipulation of contact (Time 1) to directly following the experimental manipulation of contact (Time 2) significantly predicted more positive attitudes towards Indian South Africans in general immediately after the experimental manipulation of contact with the primary outgroup (Time 2). This was found to be the case even when controlling for prior (baseline) contact with, and attitudes towards, Indian South Africans. It was hypothesised, in accordance with the process of STE, that following the contact session, extended contact participants would show a statistically significant increase in positive attitudes towards the secondary outgroup (Indian South Africans) and its members at Time 2, when controlling for prior contact, compared to their initial baseline scores at Time 1 (Hypothesis 3). These results therefore provide robust support for the presents study's third hypothesis and furthermore confirmed the presence of a secondary transfer effect for attitudes towards Indian South Africans. These results fall well within the expectations and understandings of the current body of literature surrounding the effects of extended intergroup contact on outgroup attitudes (Wright et al., 1997), and the generalisability of these effects through the process of attitude generalisation (Openshaw, 2015). Indeed, these findings replicate those observed in Openshaw's (2015) research, who also found a significant STE of extended contact.

As discussed in chapter two of the present study, an important moderator in the process of the STE is that of subjective outgroup similarities (i.e., Swart, 2008). The very nature of subjective, and indeed inter-subjective, perceptions make them incredibly hard to pin-point and claim them as shared amongst a group of individuals. However, it was assumed that as South African ethnic group relations were negatively impacted on a nation-wide scale as a result of the Apartheid regime and its associated policies, the present study's participants would intersubjectively note the similarity between the black (African) South African primary outgroup and the Indian South African secondary outgroup given their shared victimisation and discrimination faced during (and as a result of) the Apartheid era. The results of the present study seem to support this assumption. However, as the perceived outgroup similarity between the primary and secondary were not measured within the present study this assumption is speculative.

These findings suggest that extended contact interventions aimed at promoting intergroup attitudes in South Africa hold potential for the mass generalisability of attitudes across groups. Indeed, they indicate that any effects relating to outgroup attitudes brought about through extended contact interventions could generalise towards perceivably similar secondary outgroups. These results are therefore promising in relation to the practicality of implementing widespread (potentially macro level) improvement in intergroup attitudes, as they highlight the fact that such change would not require every South African citizen to undergo direct contact with each of the multiple differing ethnic groups found within the nation. These results therefore further promote the notion that contact theory-based interventions hold the greatest theoretical potential for improving intergroup relation in South Africa, through adding to the limited research on the subject within a South African context.

### **The Generalisation of Outgroup Trust across Outgroups**

The results of this analysis revealed that a positive change in trust towards black (African) South Africans in general from Time 1 to Time 2 significantly predicted more trust towards Indian South Africans in general at Time 2, when controlling for prior contact with, and trust towards, Indian South Africans at Time 1. It was hypothesised in accordance with the process of STE that, following the experimentally manipulated contact session, participants in the extended contact condition would display a statistically significant increase in trust towards the secondary outgroup (Indian South Africans) and its members at Time 2, when controlling for prior contact, compared to their initial baseline scores at Time 1 (Hypothesis 4). These findings therefore provide tentative support for the fourth hypothesis. Furthermore, these findings serve to demonstrate that participants' trust towards the primary outgroup (black (African) South Africans) brought about through extended contact, generalise to the non-contact secondary outgroup (Indian South Africans), thereby confirming the process of the secondary transfer effect of intergroup contact (STE).

These findings contribute to the limited body of research relating to the STE of outgroup trust brought about through instances of extended intergroup contact. They confirm (to a degree) the current understandings relating to both extended contact (in that trust proved more difficult to promote than attitudes; Wright et al., 1997) and the STE (in that the effects of contact can generalise to perceivably similar secondary non-contacted outgroups; Pettigrew, 2009). Fascinatingly though, they differ largely from the findings of similar studies such as Openshaw's (2015), which did not find any evidence for the STE of outgroup trust.



These findings, when examined within the grander context of the present study's findings presents an interesting quandary. It was observed that trust towards the primary outgroup (black (African) South Africans) did not increase significantly over time. This suggests therefore that should extended contact scenarios find a means to significantly promote participant trust regarding the primary outgroup, that this trust would then generalise to secondary non-contacted groups via the process of the STE. Thus, these findings, like those regarding the STE of attitudes, indicate that contact theory-based interventions may hold the key to widespread increase in, and generalisation of, intergroup trust.

### **Limitations of the Present Study**

The present study contributes to the limited body of experimental/longitudinal research regarding the extended contact theory and the secondary transfer effect within a South African context. In fact, the present study has highlighted that extended contact can promote positive attitudes towards the contacted outgroup and that this effect can generalise to a secondary (non-contacted) outgroup. Furthermore, while the present study did not find evidence that extended contact improves outgroup trust it did discover that should extended contact manage to positively impact outgroup trust with a contacted outgroup, this effect would be capable of generalising towards a secondary (perceivably similar) non-contact outgroup. However, it is important to also note that the present study is not without its own limitations. With this in mind five of the most noteworthy limitations of the present study shall be highlighted and discussed, namely (1) a lack of sufficient power, (2) generalisability beyond the Stellenbosch University context, (3) generalisability beyond the experimental context, (4) the use of single-item attitude measures, and (5) the lack of behavioural measures employed in the study.

First, and foremost, while the majority of the experimental effects of extended contact (including its statistically significant relationship with the STE) were in the directions expected from the theory (i.e., increase in trust and positive attitudes towards the outgroups following the experiment), some effects were not. There are several possible explanations and reasons for this. Arguably the most prominent/relevant of these is the relatively small sample size of participants (six control condition friendship pairs and twenty-five experimental condition participants;  $N = 37$ ), which may have limited the statistical power to perceive any significant effects. It bears noting however that most of these observed effects were, at the very least, medium in size, through careful review of Cohen's  $d$  throughout the experimental process. This in turn suggests that many of these



effects observed within the study could very well have achieved statistical significance using a larger sample size.

The second and third limitations each relate to concerns about the generalisability of the findings from the present study. It is important to recognise that the generalisability of these findings is somewhat hampered by the contextual setting in which the research took place. Stellenbosch University undeniably presents a fascinating context in which to examine intergroup contact, given South African universities past exclusion of 'non-white' students prior to the dismantling of the Apartheid regime and policies. While contact on university campuses may be more frequent, there are relatively few instances of intergroup contact and mingling in daily South African life. Therefore, by choosing to conduct the present study within this somewhat unique context of a South African university, the generalisability of the findings beyond the university context should be done with caution.

Similarly, while studies that make use of a comparable experimental design, as that employed in the present study, are generally found to have high internal validity (i.e., within the context of the study itself), they suffer from poor external validity (i.e., outside the context of the carefully control experimental environment) due to the amount of controls they have in place (i.e., Openshaw, 2015) . The present study is no different in this regard. Indeed, the sample characteristics employed by the present study hamper its external validity for several reasons. For instance, the choice to make use of solely female friendship pairs, while made with the intent to replicate and expand upon previous studies and to better direct the focus of the study whilst accounting for resource constraints, does also naturally limit the study's focus. This is because it remains theoretically possible that the findings of the present study may only hold relevance for the sample group used and not any other, non-examined, groups. Indeed, the same can be said regarding the choice to only test the effects of contact between a singular ingroup and outgroup (in relation to a singular secondary outgroup) as this further narrows the focus of the study and, possibly with it, the generalisability of these findings outside the context of these sampled groups. However, this choice was again made primarily based upon the logistical, financial and material constraints of the study. As such, it cannot be said that it is entirely clear to what extent the effects observed in the present study could be replicated outside of an experimental context (e.g., in more naturalistic contexts such as within student residences and dining halls).

In terms of the fourth limitation, the fact that the present study made use of single item measures (i.e., the feeling thermometers) can be said to limit its accuracy in measurement to a degree, given the nature of such measures. This was a topic of much thought and discussion during the

conception of the study. However, the decision was made to employ such measures nonetheless given that they are found to be far more reliable than other conceivably employable rating scales such as the 7-point Likert scale (Alwin, 1997; see also Hayduk & Littvay, 2012; Krosnick, Judd, & Wittenbrink, 2005). Using the same functionally identical scales to measure participant attitudes towards multiple outgroups does, however, theoretically run the risk of shared method variance and inflated correlations. To minimise this risk, the decision was made to compare the *difference* in participant scores relating to the primary outgroup between Time 2 to Time 1 to the *actual* Time 2 scores relating to the secondary outgroup.

Finally, the present study could have benefited from making use of other measures to aid in clarifying the variance in outcome measures. For example, the inclusion of behavioural measures in the present study would have provided greater insight into whether experimentally manipulated extended contact not only changes explicit attitudes but also participant behaviours towards the contact outgroup and a non-contact outgroup. While the inclusion of such a measure was considered, it was ultimately deemed unfeasible given the resource constraints of the study.

### **Directions for Future Research**

The present study goes some way to adding to the limited research regarding intergroup contact and the STE in South Africa. That said, the present study and its limitations, does provide hints regarding areas and methods that future studies could benefit from focusing on. For instance, the results of the present study have suggested that certain effects of intergroup contact may be found to have statistical significance when drawing from a larger sample size. Therefore, regarding sample characteristics, future research would undoubtedly benefit from avoiding this limitation by making use of larger sample sizes to ascertain if this would strengthen the statistical significance of any effects of extended intergroup contact.

Future research that focuses on intergroup contact within South African universities could also explore if the effects of contact differ, and if so how, in more naturalistic academic settings (i.e., student residences, lecture halls, and cafeterias). Furthermore, in an effort to test and improve the generalisability of the results, it is recommended that future research on contact theory within South Africa explore alternative contexts to that of Stellenbosch University (or indeed South African universities in general), as this would aid in clarifying the generalisability of intergroup contact results outside of such previously examined contexts. Examples of possible contexts of interest in this regard include South African corporate workspaces, governmental institutions, residential areas, retirement

homes, medical facilities, and so forth. Likewise, future research would do well to expand their sampling characteristics (in terms of age, sex and ethnicity) beyond the all-female white south African friendship pairs used in the present study, thereby providing more generalisable results relevant to a larger portion of the population. While the present study's focus was fixed on inter-ethnic-group relations, future research would benefit from the exploration of intergroup contact outside this sphere (i.e., religious groups, language-based groups, youth and elderly groups, native South Africans, and immigrant groups, for example). Furthermore, future research on the topic could also make use of an ingroup confederate for control condition participants to strengthen the validity and generalisability of the findings. Indeed, future experimental studies on similar topics, with access to more resources at their disposal, would do well to pursue a more longitudinal design as this could provide some valuable insight into the lasting power and the generalisability the effects of contact have over extended periods of time.

Regarding theoretical focus, there are several areas future research could explore. Future studies should include examinations of the STE for different group combinations (i.e., white South Africans interacting with coloured participants, measuring their attitudes towards (unencountered) Indian South Africans, for example). Such research should also explore group combinations using minority groups as ingroup participants to examine if this produces similar or differing effects of contact (i.e., coloured south African participants interacting with a black south African confederate measuring attitudes towards (unencountered) Indian South Africans). It should, however, again be noted that research of this kind would benefit in the examination of groups outside divides based on ethnicity.

Regarding the analyses employed, future research about intergroup relations could foreseeably benefit from using latent change or growth modelling as these methods have been argued to be better equipped to deal with possible measurement errors. Furthermore, future research on intergroup contact and the STE in South Africa should consider the inclusion of not just attitude but behavioural measures as well to examine the relationship between a change in attitudes on a change in behavioural tendencies and testing how long any such changes last (longitudinally). This bears relevance as this relationship between attitudes (how one feels) and behavioural change (how one acts on one's feelings) is still relatively unclear in contact theory research in a South African context. Furthermore, there is a need for research with a focus on the many forms indirect contact (extended or vicarious) can take. This is particularly the case in a South African context as the exploration of these alternative forms of indirect contact may reveal which is more suited to the unique context South Africa provides. Such research would also conceivably aid in clarifying the exact nature of the distinctions between these forms of indirect contact.

Outside of these recommendations based on the limitations of the present study, there remains a theoretical gap in STE literature/research. This gap relates to the understandings surrounding why the STE of extended contact effects occur, and furthermore, what the mediators of this process are. It is widely accepted that attitude generalisation plays a critical role in the generalisation of reduced prejudice levels via the STE. However, there remains some debate as to whether this is the only underlying factor in the process of the STE of contact. For instance, such concepts as empathy generalisation, deprovincialisation, and perceived similarity have each been seen put forward as being other possible explanations for the STE phenomenon. As such, a brief overview of these concepts and their relevance in future research will be provided.

The term ‘empathetic response’ refers to the two-fold ability to both cognitively take on the psychological perspective of other individuals and to begin to understand their point-of-view (cognitive perspective taking), as well as one’s ability to experience a shared emotional reaction through observing the actions/plights of others (affective empathy; Davis, 1994). An empathetic response provides one with a reason to overlook one’s own egotistical desires, which would normally afford one an advantage over others, and minimises the potential for personal cost, and instead allows for ourselves to become more open to other individuals’ subjective understanding of the world (Batson, Chang, Orr & Rowland, 2002; Batson et al., 1997). As such, empathetic responses have been found to play a significant role in promoting positive intergroup attitudes (see Finlay & Stephan, 2000; Galinsky & Moskowitz, 2000). One such example comes in the form of research conducted by Vezzali and Giovanni (2012), who found that contact with immigrants (primary outgroups) was associated with increased empathy towards immigrants, which in turn was found to be associated with increased levels of empathy towards a secondary outgroup (homosexuals and the disabled), which itself was further associated with less social distancing and increased positive attitudes towards these secondary outgroups. Likewise, Pettigrew and Tropp’s (2008) meta-analysis found evidence that empathy and perspective-taking act as significant mediators of intergroup contact effects ( $z = 12.43$ ,  $p < .001$ ). Furthermore, empathy has also been specifically linked to cross-group friendships and their ability to reduce prejudicial attitudes (e.g., Aberson & Haag, 2007; Harwood et al., 2011; Pagotto, Voci & Maculan, 2010; Tam et al., 2006).

These findings have also been found to be replicable in a South African context. One such example comes in the form of a study conducted by Swart et al. (2011), which found empathy played a strong mediating effect in the process of intergroup contact (in the form of cross-group friendships between coloured and white South Africans) promoting positive outgroup attitudes (see also Swart et al., 2010). In the same vein, De Beer (2015), Daiber, (2017) and Nell (2017), each found evidence of

empathy generalisation playing a mediating role in the STE of intergroup contact amongst Stellenbosch University student samples.

Such findings as those presented above do fit within such known psychological models as that of Batson et al's., (1997), depicting the relationship between cognitive empathy (perspective taking) and affective empathy. Put simply, this model posits that cognitive empathy occurs when an individual can empathetically adopt the perspective of an outgroup member (Batson et al., 1997; Batson et al., 2002). This then, in turn, is theorised to lead to an increased level of concern for said outgroup members' welfare (Batson et al., 1997; Batson et al., 2002). Lastly, this then leads the individual to generalise this empathetic response to the outgroup members' outgroup as a whole (Batson et al., 1997; Batson et al., 2002). However, as can be noted above, much of the current research on empathy generalisation deals with its role in intergroup contact and not its role in the process of the STE of contact. While this does not necessarily indicate that empathy generalisation does not play a large mediating role in the STE (indeed it suggests the opposite) it is worth noting that this area of research requires further study. Indeed, as it stands such research has yet to be explored fully, and empathy generalisation has yet to distinguish itself as distinct from the notion of attitude generalisation and its noted prominence in the process of the STE. As such, contact theory research would undoubtedly benefit from more thorough research on this potential mediator in of the STE.

Let us now turn our focus towards the concept of deprovincialisation. Pettigrew (1997, 1998) posited the notion of deprovincialisation (a change in how we view ourselves and the world) as a possible explanation for how the process of the STE takes place. This notion was positioned on the understanding of ingroup bias itself being predicted by Social Identity Theory. Social Identity Theory states that we as individuals of an ingroup attempt to differentiate and distinguish said ingroup from other outgroups to achieve some form of positive group identity and self-identity (Tajfel & Turner, 1979). Pettigrew (1997, 1998) therefore suggested that through positive contact with an outgroup an individual gains greater knowledge regarding the outgroup and thusly begins to breakdown and reassess their own held ingroup understandings, norms and self-identity. Pettigrew (1997, 1998) further suggests that in doing so individuals begin to realise that their worldview and understandings are not inherently superior or indeed the only lens through which the world can be viewed and understood (Pettigrew, 1997). This would make sense given that we know the opposite to be true in historical contexts characterised by intergroup conflict and tension where ingroup members views regarding outgroups and their members can be negatively influenced by ingroup propaganda (i.e., Nazi views regarding the Jewish people during WW2, white South Africans views regarding black (African) South Africans during apartheid, and so forth).

Deprovincialisation is therefore linked somewhat with the concepts of de-categorisation and re-categorisation. De-categorisation being the process in which the once rigidly perceived differences between one's ingroup and other outgroups are lessened, reducing the salience of such differences and categorisations (Brewer & Miller, 1984). Positive contact, particularly through strong relationships such as cross-group friendships, therefore can be seen to function as a means for individuals to humanise outgroups and their members, which serves to challenge binary and rigid understandings of the 'other' (e.g., Verkuyten, Thijs & Bekhuis, 2010). This de-categorisation can then possibly lead into a re-categorisation of the 'other' being similar, allowing for the re-categorisation of 'Us' and 'Them' into a singular inclusive 'We'.

The notion of deprovincialization playing a role in the process of the STE has found some research-based backing since its proposal. Pettigrew (2009) conducted a study in which German citizens were questioned via a telephonic survey regarding their attitudes towards immigrants, in order to test this notion of deprovincialisation. The results of this study showed that those individuals who reported having positive contact instances with immigrants displayed a lowered sense of national identification which in turn was found to be linked with better attitudes towards such secondary outgroups as the homeless and homosexuals (Pettigrew, 2009). These results therefore revealed that a lowered sense of national identity can in turn predict more positive attitudes to primary outgroups which in turn is generalised to positively affect attitudes towards associated secondary outgroups. However, it bears noting that while the deprovincialisation theory has received empirical support, research regarding deprovincialisation as a factor in the process of the STE is still somewhat inconclusive, owing to a lack of definitional clarity and some research finding no links between ingroup re-appraisal and the STE (see Eller & Abrams, 2004). Therefore, future research on this topic is highly recommended.

Lastly, we turn our attention towards group combinations and perceived similarity. Perceived similarity has been shown to play a role in the effectiveness of contact and the STE (see Eller et al., 2012). Future research should therefore explore in greater detail the perceived similarity between outgroups and how this may be complicated by general subjectivity. Indeed, there is already noted difficulty in distinctly defining such groups in a South African context. This as South Africa comprises of multiple differing groups with varying levels of overlap and perceived importance. For instance, while an individual may identify as a black (African) South African they may also sub categorise themselves as either Zulu, Xhosa, Tswana, etc, or they may choose to prioritise their self-other-categorisation as Christian, Muslim, Hindu, etc. Therefore, there is a noted need for research measuring if visual characteristics or cultural perspectives play a greater role in informing this similarity assessment.

## Conclusion

The present study aimed at providing support for extended contact and the secondary transfer effect of contact, within a South African University context. The findings of this study suggest that the promotion of positive intergroup attitudes through extended intergroup contact is slightly more difficult to achieve than expected and is perhaps more reliant on the direct contact instance observed than previously thought. However, they also suggest that while change in participant attitudes regarding the primary outgroup (black (African) South Africans) were found in this instance to be lacking statistical significance, they were noted to shift in the hypothesised direction (positive change) and as such may achieve greater significance within a greater data pool. The promotion of positive outgroup trust through extended intergroup contact proved harder to achieve and was found to be non-significant, using the present study's design, suggesting that intergroup trust may require more than one quality positive instance of intergroup contact to achieve. However, perhaps the most enlightening findings noted within the present study relate to the noted generalisation of both participant attitudes and trust from the primary outgroup to the secondary outgroup (Indian South Africans) which proves the existence of a secondary transfer effect of extended intergroup contact within a South African context, and further notes the relative strength of this generalisation effect. As such the results of the present study can aid in the formulation of structured intergroup encounters and interventions at Stellenbosch University which are tailored to achieve specific outcomes intended at collectively improving intergroup relations, and co-operation, at the University.



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## APPENDIX A

### REC Clearance and Institutional Permission



#### NOTICE OF APPROVAL

##### REC Humanities New Application Form

14 March 2019

Project number: 8840

Project Title: The influence of direct and extended intergroup contact on attitude generalization: An experimental study of contact's secondary transfer effect.

Dear Dr Hermann Swart

#### Co-investigators:

Mr George Berry, Ms Simone Strydom

Your REC Humanities New Application Form submitted on 7 March 2019 was reviewed and approved by the REC: Humanities.

Please note the following for your approved submission:

#### **Ethics approval period:**

Protocol approval date (Humanities)	Protocol expiration date (Humanities)
14 March 2019	13 March 2020

#### **GENERAL COMMENTS:**

Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

**If the researcher deviates in any way from the proposal approved by the REC: Humanities, the researcher must notify the REC of these changes.**

Please use your SU project number (8840) on any documents or correspondence with the REC concerning your project.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

#### **FOR CONTINUATION OF PROJECTS AFTER REC APPROVAL PERIOD**

Please note that a progress report should be submitted to the Research Ethics Committee: Humanities before the approval period has expired if a continuation of ethics approval is required. The Committee will then consider the continuation of the project for a further year (if necessary)

#### **Included Documents:**

Document Type	File Name	Date	Version
Research Protocol/Proposal	Direct and Extended Contact STE Experiment Proposal 2018	08/11/2018	Original
Recruitment material	Direct and Extended Contact STE Experiment Proposal 2018_Appendix B Class Announcement	08/11/2018	Original
Informed Consent Form	Direct and Extended Contact STE Experiment Proposal 2018_Appendix H Participant Informed Consent	08/11/2018	Original
Data collection tool	Direct and Extended Contact STE Experiment Proposal 2018_Appendix C Survey 1	08/11/2018	Original
Data collection tool	Direct and Extended Contact STE Experiment Proposal 2018_Appendix D Post-manipulation survey	08/11/2018	Original
Data collection	Direct and Extended Contact STE Experiment Proposal 2018_Appendix E	08/11/2018	Original

tool	Final survey		
Request for permission	Direct and Extended Contact STE Experiment Proposal 2018_Appendix J Letter for Institutional Permission	08/11/2018	Original
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix A Closeness Induction Task	08/11/2018	Original
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix F Experimental and Control Manipulation Protocol	08/11/2018	Original
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix G Measures of State Anxiety	08/11/2018	Original
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix I Confederate Informed Consent	08/11/2018	Original
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix I Confederate Informed Consent - AMENDED	07/03/2019	Amended
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix D Post-manipulation survey - AMENDED	07/03/2019	Amended
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix H Participant Informed Consent - AMENDED	07/03/2019	Amended
Default	Direct and Extended Contact STE Experiment Proposal 2018_Appendix K_George Berry Simone Strydom NonDisclosure Agreement	07/03/2019	Original
Default	Brochure	07/03/2019	Original
Default	DC v EC Experimental Project_Response to the REC_26 February 2019	07/03/2019	Response01

If you have any questions or need further help, please contact the REC office at [cgraham@sun.ac.za](mailto:cgraham@sun.ac.za).

Sincerely,

Clarissa Graham

REC Coordinator: Research Ethics Committee: Human Research (Humanities)

*National Health Research Ethics Committee (NHREC) registration number: REC-050411-032.*

*The Research Ethics Committee: Humanities complies with the SA National Health Act No.61 2003 as it pertains to health research. In addition, this committee abides by the ethical norms and principles for research established by the Declaration of Helsinki (2013) and the Department of Health Guidelines for Ethical Research: Principles Structures and Processes (2<sup>nd</sup> Ed.) 2015. Annually a number of projects may be selected randomly for an external audit.*



## **Investigator Responsibilities**

### **Protection of Human Research Participants**

Some of the general responsibilities investigators have when conducting research involving human participants are listed below:

**1. Conducting the Research.** You are responsible for making sure that the research is conducted according to the REC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research. You must also ensure that the research is conducted within the standards of your field of research.

**2. Participant Enrollment.** You may not recruit or enroll participants prior to the REC approval date or after the expiration date of REC approval. All recruitment materials for any form of media must be approved by the REC prior to their use.

**3. Informed Consent.** You are responsible for obtaining and documenting effective informed consent using **only** the REC-approved consent documents/process, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed informed consent documents. Keep the originals in your secured research files for at least five (5) years.

**4. Continuing Review.** The REC must review and approve all REC-approved research proposals at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period**. Prior to the date on which the REC approval of the research expires, it is **your responsibility to submit the progress report in a timely fashion to ensure a lapse in REC approval does not occur**. If REC approval of your research lapses, you must stop new participant enrollment, and contact the REC office immediately.

**5. Amendments and Changes.** If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the REC for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written REC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the REC should be immediately informed of this necessity.

**6. Adverse or Unanticipated Events.** Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research related injuries, occurring at this institution or at other performance sites must be reported to Malene Fouche within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the REC's requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch University Research Ethics Committee Standard Operating Procedures. All reportable events should be submitted to the REC using the Serious Adverse Event Report Form.

**7. Research Record Keeping.** You must keep the following research related records, at a minimum, in a secure location for a minimum of five years: the REC approved research proposal and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the REC

**8. Provision of Counselling or emergency support.** When a dedicated counsellor or psychologist provides support to a participant without prior REC review and approval, to the extent permitted by law, such activities will not be recognised as research nor the data used in support of research. Such cases should be indicated in the progress report or final report.

**9. Final reports.** When you have completed (no further participant enrollment, interactions or interventions) or stopped work on your research, you must submit a Final Report to the REC.

**10. On-Site Evaluations, Inspections, or Audits.** If you are notified that your research will be reviewed or audited by the sponsor or any other external agency or any internal group, you must inform the REC immediately of the impending audit/evaluation.





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## INSTITUTIONAL PERMISSION:

### AGREEMENT ON USE OF PERSONAL INFORMATION IN RESEARCH

Name of Researcher: Dr Hermann Swart

Name of Research Project: The influence of direct and extended intergroup contact on attitude generalization:  
An experimental study of contact's secondary transfer effect

Service Desk ID: IRPSD 1264

Date of Issue: 28 March 2019

You have received institutional permission to proceed with this project as stipulated in the institutional permission application and within the conditions set out in this agreement.

1 WHAT THIS AGREEMENT IS ABOUT	
What is POPI?	<p>1.1 POPI is the Protection of Personal Information Act 4 of 2013.</p> <p>1.2 POPI regulates the entire information life cycle from collection, through use and storage and even the destruction of personal information.</p>
Why is this important to us?	<p>1.3 Even though POPI is important, it is not the primary motivation for this agreement. The privacy of our students and employees are important to us. We want to ensure that no research project poses any risks to their privacy.</p> <p>1.4 However, you are required to familiarise yourself with, and comply with POPI in its entirety.</p>
What is considered to be personal information?	<p>1.5 'Personal information' means information relating to an identifiable, living, individual or company, including, but not limited to:</p> <p>1.5.1 information relating to the race, gender, sex, pregnancy, marital status, national, ethnic or social origin, colour, sexual orientation, age, physical or mental health, well-being, disability, religion, conscience, belief, culture, language and birth of the person;</p> <p>1.5.2 information relating to the education or the medical, financial, criminal or employment history of the person;</p>

	<p>1.5.3 any identifying number, symbol, e-mail address, physical address, telephone number, location information, online identifier or other particular assignment to the person;</p> <p>1.5.4 the biometric information of the person;</p> <p>1.5.5 the personal opinions, views or preferences of the person;</p> <p>1.5.6 correspondence sent by the person that is implicitly or explicitly of a private or confidential nature or further correspondence that would reveal the contents of the original correspondence;</p> <p>1.5.7 the views or opinions of another individual about the person; and</p> <p>1.5.8 the name of the person if it appears with other personal information relating to the person or if the disclosure of the name itself would reveal information about the person.</p>
Some personal information is more sensitive.	<p>1.6 Some personal information is considered to be sensitive either because:</p> <p>1.6.1 POPI has classified it as sensitive;</p> <p>1.6.2 if the information is disclosed it can be used to defraud someone; or</p> <p>1.6.3 the disclosure of the information will be embarrassing for the research subject.</p> <p>1.7 The following personal information is considered particularly sensitive:</p> <p>1.7.1 Religious or philosophical beliefs;</p> <p>1.7.2 race or ethnic origin;</p> <p>1.7.3 trade union membership;</p> <p>1.7.4 political persuasion;</p> <p>1.7.5 health and health related documentation such as medical scheme documentation;</p> <p>1.7.6 sex life;</p> <p>1.7.7 biometric information;</p> <p>1.7.8 criminal behaviour;</p> <p>1.7.9 personal information of children under the age of 18;</p> <p>1.7.10 financial information such as banking details, details relating to financial</p>

	<p>products such as insurance, pension funds or other investments.</p> <p>1.8 You may make use of this type of information, but must take extra care to ensure that you comply with the rest of the rules in this document.</p>
<b>2 COMMITMENT TO ETHICAL AND LEGAL RESEARCH PRACTICES</b>	
You must commit to the use of ethical and legal research practices.	<p>2.1 You must obtain ethical clearance before commencing with this study.</p> <p>2.2 You commit to only employing ethical and legal research practices.</p>
You must protect the privacy of your research subjects.	<p>2.3 You undertake to protect the privacy of the research subjects throughout the project.</p>
<b>3 RESEARCH SUBJECT PARTICIPATION</b>	
Personal information of identifiable research subjects must not be used without their consent.	<p>3.1 Unless you have obtained a specific exemption for your research project, consent must be obtained in writing from the research subject, before their personal information is gathered.</p>
Research subjects must be able to withdraw from the research project.	<p>3.2 Research subjects must always be able to withdraw from the research project (without any negative consequences) and to insist that you destroy their personal information.</p>
Consent must be specific and informed.	<p>3.3 Unless you have obtained a specific exemption for your research project, the consent must be specific and informed. Before giving consent, the research subject must be informed in writing of:</p> <p>3.3.1 The purpose of the research,</p> <p>3.3.2 what personal information about them will be collected (particularly sensitive personal information),</p> <p>3.3.3 how the personal information will be collected (if not directly from them),</p> <p>3.3.4 the specific purposes for which the personal information will be used,</p> <p>3.3.5 what participation will entail (i.e. what the research subject will have to do),</p> <p>3.3.6 whether the supply of the personal information is voluntary or mandatory for purposes of the research project,</p>

	<p>3.3.7 who the personal information will be shared with,</p> <p>3.3.8 how the personal information will be published,</p> <p>3.3.9 the risks to participation (if any),</p> <p>3.3.10 their rights to access, correct or object to the use of their personal information,</p> <p>3.3.11 their right to withdraw from the research project, and</p> <p>3.3.12 how these rights can be exercised.</p>
Consent must be voluntary.	3.4 Participation in the research project must always be voluntary. You must never pressure or coerce research subjects into participating and persons who choose not to participate must not be penalised.
Using the personal information of children?	<p>3.5 A child is anybody under the age of 18.</p> <p>3.6 Unless you have obtained a specific exemption in writing for your research project, you must obtain</p> <p>3.6.1 the consent of the child's parent or guardian, and</p> <p>3.6.2 if the child is over the age of 7, the assent of the child, before collecting the child's information.</p>
Research subjects have a right to access.	3.7 Research subjects have the right to access their personal information, obtain confirmation of what information is in your possession and who had access to the information. It is strongly recommended that you keep detailed records of access to the information.
Research subjects have a right to object.	<p>3.8 Research subjects have the right to object to the use of their personal information.</p> <p>3.9 Once they have objected, you are not permitted to use the personal information until the dispute has been resolved.</p>
<b>4 COLLECTING PERSONAL INFORMATION</b>	
Only collect what is necessary.	4.1 You must not collect unnecessary or irrelevant personal information from research subjects.
Only collect accurate personal information.	4.2 You have an obligation to ensure that the personal information you collect is accurate. Particularly when you are collecting it from a source other than the

	research subject.
	4.3 If you have any reason to doubt the quality of the personal information you must verify or validate the personal information before you use it.
<b>5 USING PERSONAL INFORMATION</b>	
Only use the personal information for the purpose for which you collected it.	<p>5.1 Only use the personal information for the purpose for which you collected it.</p> <p>5.2 If your research project requires you to use the personal information for a materially different purpose than the one communicated to the research subject, you must inform the research subjects and Stellenbosch University of this and give participants the option to withdraw from the research project.</p>
Be careful when you share personal information.	<p>5.3 Never share personal information with third parties without making sure that they will also follow these rules.</p> <p>5.4 Always conclude a non-disclosure agreement with the third parties.</p> <p>5.5 Ensure that you transfer the personal information securely.</p>
Personal information must be anonymous whenever possible.	5.6 If the research subject's identity is not relevant for the aims of the research project, the personal information must not be identifiable. In other words, the personal information must be anonymous (de-identified).
Pseudonyms must be used whenever possible.	5.7 If the research subject's identity is relevant for the aims of the research project or is required to co-ordinate, for example, interviews, names and other identifiers such as ID or student numbers must be collected and stored separately from the rest of the research data and research publications. In other words, only you must be able to identify the research subject.
Publication of research	<p>5.8 The identity of your research subjects should not be revealed in any publication.</p> <p>5.9 In the event that your research project requires that the identity of your research subjects must be revealed, you must apply for an exemption from this rule.</p>
<b>6 SECURING PERSONAL INFORMATION</b>	
You are responsible for the confidentiality and security of the personal information	<p>6.1 Information must always be handled in the strictest confidence.</p> <p>6.2 You must ensure the integrity and security of the information in your possession or under your control by taking appropriate and reasonable technical and</p>



	<p>organisational measures to prevent:</p> <p>6.2.1 Loss of, damage to or unauthorised destruction of information; and</p> <p>6.2.2 unlawful access to or processing of information.</p> <p>6.3 This means that you must take reasonable measures to:</p> <p>6.3.1 Identify all reasonably foreseeable internal and external risks to personal information in your possession or under your control;</p> <p>6.3.2 establish and maintain appropriate safeguards against the risks identified;</p> <p>6.3.3 regularly verify that the safeguards are effectively implemented; and</p> <p>6.3.4 ensure that the safeguards are continually updated in response to new risks or deficiencies in previously implemented safeguards.</p>
Sensitive personal information requires extra care.	6.4 You will be expected to implement additional controls in order to secure sensitive personal information.
Are you sending any personal information overseas?	<p>6.5 If you are sending personal information overseas, you have to make sure that:</p> <p>6.5.1 The information will be protected by the laws of that country;</p> <p>6.5.2 the company or institution to who you are sending have agreed to keep the information confidential, secure and to not use it for any other purpose; or</p> <p>6.5.3 get the specific and informed consent of the research subject to send the information to a country which does not have data protection laws.</p>
Be careful when you use cloud storage.	<p>6.6 Be careful when storing personal information in a cloud. Many clouds are hosted on servers outside of South Africa in countries that do not protect personal information to the same extent as South Africa. The primary example of this is the United States.</p> <p>6.7 It is strongly recommended that you use hosting companies who house their servers in South Africa.</p> <p>6.8 If this is not possible, you must ensure that the hosting company agrees to protect the personal information to the same extent as South Africa.</p>
<b>7 RETENTION AND DESTRUCTION OF PERSONAL INFORMATION</b>	
You are not entitled to retain personal information when	7.1 Personal information must not be retained beyond the purpose of the research project, unless you have a legal or other justification for retaining the information.

you no longer need it for the purposes of the research project.	
If personal information is retained, you must make sure it remains confidential.	<p>7.2 If you do need to retain the personal information, you must assess whether:</p> <p>7.2.1 The records can be de-identified; and/or whether</p> <p>7.2.2 you have to keep all the personal information.</p> <p>7.3 You must ensure that the personal information which you retain remains confidential, secure and is only used for the purposes for which it was collected.</p>
<b>8 INFORMATION BREACH PROCEDURE</b>	
In the event of an information breach you must notify us immediately.	<p>8.1 If there are reasonable grounds to believe that the personal information in your possession or under your control has been accessed by any unauthorised person or has been disclosed, you must notify us immediately.</p> <p>8.2 We will notify the research subjects in order to enable them to take measures to contain the impact of the breach.</p>
This is the procedure you must follow.	<p>8.3 You must follow the following procedure:</p> <p>8.3.1 Contact the Division for Institutional Research and Planning at 021 808 9385 and <a href="mailto:permission@sun.ac.za">permission@sun.ac.za</a>;</p> <p>8.3.2 you will then be required to complete the information breach report form which is attached as Annexure A.</p> <p>8.4 You are required to inform us of a information breach within 24 hours. Ensure that you have access to the required information.</p>
<b>9 MONITORING</b>	
You may be audited.	<p>9.1 We reserve the right to audit your research practices to assess whether you are complying with this agreement.</p> <p>9.2 You are required to give your full co-operation during the auditing process.</p> <p>9.3 We may also request to review:</p> <p>9.3.1 Forms (or other information gathering methods) and notifications to research subjects, as referred to in clause 3;</p>

	<p>9.3.2 non-disclosure agreements with third parties with whom the personal information is being shared, as referred to in clause 5.4;</p> <p>9.3.3 agreements with foreign companies or institutes with whom the personal information is being shared, as referred to in clause 6.5.</p>
<b>10 CHANGES TO RESEARCH</b>	
You need to notify us if any aspect of your collection or use of personal information changes.	<p>10.1 You must notify us in writing if any aspect of your collection or use of personal information changes (e.g. such as your research methodology, recruitment strategy or the purpose for which you use the research).</p> <p>10.2 We may review and require amendments to the proposed changes to ensure compliance with this agreement.</p> <p>10.3 The notification must be sent to <a href="mailto:permission@sun.ac.za">permission@sun.ac.za</a>.</p>
<b>11 CONSEQUENCES OF BREACH</b>	
What are the consequences of breaching this agreement?	<p>11.1 If you do not comply with this agreement, we may take disciplinary action or report such a breach to your home institute.</p> <p>11.2 You may be found guilty of research misconduct and may be censured in accordance with Stellenbosch University or your home institute's disciplinary code.</p>
You may have to compensate us in the event of any legal action.	<p>11.3 Non-compliance with this agreement could also lead to claims against Stellenbosch University in terms of POPI and/or other laws.</p> <p>11.4 Unless you are employed by or studying at Stellenbosch University, you indemnify Stellenbosch University against any claims (including all legal fees) from research subjects or any regulatory authority which are the result of your research project. You may also be held liable for the harm to our reputation should there be an information breach as a result of your non-compliance with this agreement.</p>
<b>12 CONTACT US</b>	
Please contact us if you have any questions.	Should you have any questions relating to this agreement you should contact <a href="mailto:permission@sun.ac.za">permission@sun.ac.za</a> .



## Annexure 'A'

## Instruction:

Please send this Notice to [permission@sun.ac.za](mailto:permission@sun.ac.za). If you have any difficulty completing the Notice, please contact the Division for Institutional Research and Planning at 021 808 9385. You must confirm that the Notice was received.

## NOTIFICATION OF INFORMATION BREACH

Name of Researcher: \_\_\_\_\_

Name of Research Project: \_\_\_\_\_

Service Desk ID: \_\_\_\_\_

A security breach happens when you know (or you reasonably believe) that there has been:

- (a) loss of Personal Information ("PI")
- (b) damage to PI
- (c) unauthorised destruction of PI
- (d) unauthorised access to PI
- (e) unauthorised processing of PI

Date and time of security breach:	
Brief description of the security breach (what was lost and how). Please identify the equipment, software and/or physical premises and whether it is by hacking, lost device, public disclosure (email), theft or other means:	
Name of the person/s responsible for the security breach (if known):	
Is the security breach ongoing?	
Describe the steps taken to contain the security breach:	
What steps are being taken to investigate the cause of breach?	

## APPENDIX B

### Class/Tutorial Announcement and Participant Recruitment Email

#### **Announcement**

Good day class/students. I would just like to inform you all of an opportunity to be involved in a Masters student psychology research project. The project is in regards to friendship formation and is currently looking for participants. At this stage, due to logistical reasons, the project is currently looking for female only friendship pairs to participate, however there is a possibility that participant recruitment may be opened to males at a later stage. Neither yourself or your female friend have to be psychology students to be eligible for participation however you must both be comfortable conversing in English. Your participation in this study will have you completing three surveys and complete a short task in three quick (not more than 45 mins in length) meetings once a week for three weeks. Once you complete your participation in this study you and your friend will each be given a R100 Neelsie voucher as compensation. If you (being female) and a close female friend are interested in participating in this project please could you either email [email provided] or simply write you and your friends name, student number and preferred email address on a piece of paper and place it in this container [show container] and you will receive an email with further details regarding the project and your potential participation. Thank you all so much for your time. I'll be waiting at the door should you wish to place your papers in the container.

**APPENDIX B (continued)****Class/Tutorial Announcement and Participant Recruitment Email****Email**

“Dear \_\_\_\_\_

Thank you so much for expressing an interest in taking part in our Study.

As stated in the class/tutorial announcement (the one by Dr. Hermann Swart), we are conducting a study regarding friendship formation among students, which consists of a few quick surveys and tasks. This research project has been reviewed by, and received ethics clearance from, Stellenbosch University’s ethics committee. We are looking for pairs of friends of the same sex (at this stage female only), who are comfortable communicating in English. Both yourself and the friend you choose to participate with you in the study do not need to be a psychology student (you can be, but you can also be a student in another faculty). Following the completion of participation, the two of you will each receive a R100 Neelsie voucher as compensation. Should this sound agreeable, and you both wish to proceed in putting forward your names for consideration we ask that you select a time slot from the attached document in which you and your friend can come in for a meeting in which we will discuss the details of the study and assess your eligibility for participation. Please note that while this are hour long time slots this is just a precaution to avoid the need to rush and the meeting itself should take approximately 15-30 mins

Should you have any questions or queries regarding the study please don’t hesitate to email us.

Warm regards,

George and Simone (Study Co-ordinators)”

## APPENDIX C

### Participant Informed Consent Form



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#### STELLENBOSCH UNIVERSITY CONSENT TO PARTICIPATE IN RESEARCH

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##### Social Relations and Friendship Formation

You are asked to participate in a research study conducted by Dr Hermann Swart (Department of Psychology), in collaboration with Mr George Berry and Ms Simone Strydom (Masters Students, Stellenbosch University). You were selected as a possible participant in this study because you are a student enrolled at Stellenbosch University, are over the age of 18, and have volunteered. Participation in this study requires that participants participate together with a same-sex friend of theirs, and that both participants are sufficiently proficient in reading and writing in English, as well as being comfortable having a conversation in English. The results of the study will be used to publish in international journals as well as part of Mr Berry and Ms. Strydom's Masters thesis at Stellenbosch University.

#### 1. PURPOSE OF THE STUDY

This study examines the processes involved in the early stages of friendship formation and how these relate to social relationships in general.

#### 2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

1. Fill out a questionnaire that should not take more than 45 minutes of your time.
2. Come to the Psychology Department with a close friend at a time of your convenience for a 20-minute exercise where we will explore the processes of friendship formation.
3. Fill out an additional two questionnaires, one directly after the exercise at the psychology department and a final questionnaire approximately one week after the exercise.

The total amount of time that you will be asked to spend while participating in this study will not be more than forty minutes.



Departement Sielkunde • Department of Psychology

### 3. POTENTIAL RISKS AND DISCOMFORTS

We do not anticipate any risks to you for participating in this research, as similar research has been conducted in the past without adverse reactions. Participants in related studies have found the experience rewarding, but in the unlikely event that your participation leaves you feeling unhappy, throughout the study, we will provide you with pamphlets and contact details for both the *Centre for Counseling and Student Development* and the *Welgevallen Community Psychology Clinic*, both of which offer free counselling services to Stellenbosch University students. Their contact details appear below:

*Centre for Counselling and Student Development Contact Details:*

**Address:** 37 Victoria Street, Stellenbosch

**Tel:** +27 (0)21 808 4707/1626

**Tel:** 082 557 0880 (for 24 hours emergencies)

*Welgevallen Community Psychology Clinic*

**Address:** Welgevallen House, Suidwal Street, Stellenbosch

**Tel:** +27 (0)21 808 2696

**Email:** [wcp@sun.ac.za](mailto:wcp@sun.ac.za)

### 4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Understanding the mechanisms behind friendship formation (and the possible benefits that result) will allow institutions such as Stellenbosch University to develop programs that promote a more friendly campus climate. The findings of this study will therefore be shared with Stellenbosch University management for tailoring campus experiences that promote the formation of friendships amongst students. The research may also have wider applicability on the international stage as we hope to publish the results in peer-review journals as well as present our findings at (inter)national conferences.

### 5. PAYMENT FOR PARTICIPATION

You and your friend will each receive a R100 Neelsie voucher should you complete each phase of this study.

### 6. CONFIDENTIALITY

The only piece of information that we will collect that could potentially identify you is your e-mail address (which will be required to send you the various surveys and to make the necessary logistic arrangements with you to complete the friendship formation task). Once you have completed your participation in this study, your email address and all previous correspondence relating to this study will be deleted.

No other student or staff at the University of Stellenbosch will have access to the data you provide during the course of this study. The data will be kept in password protected format on the personal or office computers belonging to the researcher.

Mr Berry and Ms Strydom will only have access to fully anonymised data to analyse for their theses. As such, they will never know which individual participant provided which data. Only anonymised, averaged data will be used in any analyses and results will be used for the write-up of the Masters thesis by Mr Berry and Ms Strydom, a number of manuscripts for submission to international peer-reviewed academic journals, and presentations at (inter)national conferences. After the study has been completed and the data fully analysed, the data files will be electronically

archived. In accordance with American Psychological Association guidelines, the data will be securely archived for up to 5 years after publication and then destroyed.

## 7. PARTICIPATION AND WITHDRAWAL

You can choose to participate in this study or not. If you volunteer to be in this study, you may withdraw at *any time* without any consequences. You may withdraw from the study during any of the surveys (simply by closing the web-browser) or during the exercise (by informing the researcher of your desire to withdraw your participation). Please note that if *either* you or your friend chose to withdraw from this study, we will unfortunately be unable to allow the other friend to continue, nor can we allow for a substitute to take the withdrawn participant's place (as this study requires that the friendship-pairs that begin this study should participate and complete each of the phases of this study). You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject contact Ms Maléne Fouché ([mfouche@sun.ac.za](mailto:mfouche@sun.ac.za); 021 808 4622) at the Division for Research Development. The researchers may withdraw you from this study should any circumstances arise which warrant doing so.

## 8. IDENTIFICATION OF INVESTIGATOR

If you have any questions or concerns about the research, please feel free to contact either the researcher or their supervisor at the contact details provided below.

### Dr. Hermann Swart: Supervisor

Position: Lecturer, Department of Psychology, Stellenbosch University  
E-mail: [hswart@sun.ac.za](mailto:hswart@sun.ac.za)  
Tel: (021) 808 9061

### Mr George Berry: Researcher

Position: Magister Candidate, Department of Psychology, Stellenbosch University  
E-mail: [georgetberry@gmail.com](mailto:georgetberry@gmail.com)

### Ms Simone Strydom: Researcher

Position: Magister Candidate, Department of Psychology, Stellenbosch University  
E-mail: [simonestrydom20@gmail.com](mailto:simonestrydom20@gmail.com)

**SIGNATURE OF RESEARCH SUBJECT**

The information above was described to me by Mr George Berry and/or Ms Simone Strydom and/or Dr Hermann Swart in English. I am in command of this language. I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily to participate in this study. I have been given a copy of this form.

\_\_\_\_\_  
**Name of Subject/Participant**

\_\_\_\_\_  
**Signature of Subject/Participant**

\_\_\_\_\_  
**Date**

**SIGNATURE OF INVESTIGATOR**

I declare that I explained the information given in this document to \_\_\_\_\_. She was encouraged and given ample time to ask me any questions. This conversation was conducted in English and no translator was used.

\_\_\_\_\_  
**Name of Investigator**

\_\_\_\_\_  
**Signature of Investigator**

\_\_\_\_\_  
**Date**



**APPENDIX D****Participant Non-Disclosure Agreement**

# Participant Confidentiality Agreement

---

***Study: Social Relations and Friendship Formation among Stellenbosch University Students***

I, \_\_\_\_\_.

student number: \_\_\_\_\_, hereby **agree to keep all the details that are shared to me by the researchers (or that I come to learn through my participation) about this study confidential, and to not share any of this information with anyone else.**

\_\_\_\_\_  
(Participant - print name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Principal Investigator - print name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)



## APPENDIX E

### Survey 1 (All Participants)

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AB-ID:



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***Social Relations and Friendship Formation  
Among Stellenbosch University Students  
2019***

---

**Thank you for providing informed consent for participating in this study.** Your participation will make a valuable contribution towards our understanding of those factors that promote social relations and friendship formation among Stellenbosch University students. This is the first of three surveys that you need to complete in this study. After completing all three surveys you will be given a **R100 Neelsie** cash voucher.

---

### SURVEY ONE

#### INSTRUCTIONS:

1. Please **read each question carefully.**
2. Please **answer each question as accurately as possible.**
3. Please **do not think too long about each answer.** Your **first answer** or your **first impression** is **generally the most accurate. There are no right or wrong answers.**
4. Please **be honest** with your answers. Your answers will be treated with **strict confidentiality.**

**Friendship Type (FType)**

1. Which one of the following options below best describes the nature of your friendship with the friend you are participating in this study with?

- ☐ An acquaintance
                     ☐ Just a friend
                     ☐ A very close friend  
☐ One of my closest friends
                     ☐ My best friend  
☐ We are in a romantic relationship

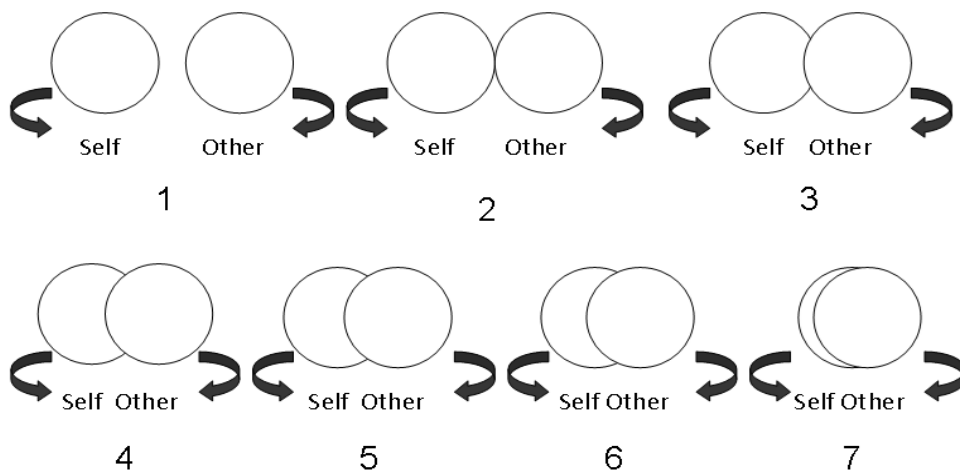
**Friendship Length (FLength)**

2. Think back carefully and indicate as best as you can the month and the year the two of you met:

**Year:** \_\_\_\_\_ **Month:** \_\_\_\_\_

**Friendship Closeness (FClose)**

3. Look at the picture below. It contains seven images that represent your relationship with this friend. **The closer the circles are to one another and the more they overlap with each other, the closer the relationship between you and your friend is.** Please look at the picture and **circle the number of the image** that best represents your relationship with this friend.





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## DEMOGRAPHICS

### INSTRUCTIONS:

*We would like to first ask you some questions about yourself. Please answer each question below as accurately as possible.*

***Please write neatly and clearly.***

1. **How old are you?** \_\_\_\_\_ years old

2. **What is your home language (select the appropriate option)?**

☐ English      ☐ Afrikaans      Other (specify): \_\_\_\_\_

3. **What is your nationality (select the appropriate option)?**

☐ South African      Other (specify): \_\_\_\_\_

4. **If you indicated 'South African' above, please indicate the broad South African population group you would identify yourself with:** (Please note: *The Department of Psychology at Stellenbosch University does not acknowledge or endorse the legitimacy of the artificial categories below, and accepts that individuals might categorize themselves in a number of different ways over-and-above, or other than just, ethnicity. The category you select below does not mean that you endorse the category rather that it provides a context for understanding your point of view or experiences.*):

☐ white South African      ☐ coloured South African      ☐ Indian South African  
☐ black (African) South African      ☐ Asian South African      Other: \_\_\_\_\_



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## DEMOGRAPHICS

(continued)

5. **How many consecutive years (without interruption) have you been a student at Stellenbosch University?**

This is my \_\_\_\_\_ year at Stellenbosch University

6. **Which University Residence (Koshuis) or PSO do you belong to?**

\_\_\_\_\_

7. **Which degree are you studying for right now?**

\_\_\_\_\_

*In order to match up your three questionnaires, we will need a unique code for each participant. This code is made up in such a way that there is no way in which the researchers will be able to trace it back to you.*

**The first part of your code: Please enter the LAST four digits of your student number in this box.**

**The second part of your code: Please enter your day of birth (between 01 and 31) into this box.**



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## MAIN SURVEY

### INSTRUCTIONS:

*Please answer each question below as accurately as possible. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answers will be treated with the strictest confidentiality.*

### Question 1:

*Please think about **how you are feeling at the moment**. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion**.*

1.1	Rate the <b>extent to which you Agree or Disagree</b> that each of the following statements describes <b>how you are feeling now</b>					
		<b>Strongly Disagree (1)</b>	<b>Disagree (2)</b>	<b>Neither Agree Nor Disagree (3)</b>	<b>Agree (4)</b>	<b>Strongly Agree (5)</b>
	I am <b>feeling happy</b>					
	I am <b>feeling frustrated</b>					
	I am <b>feeling irritated</b>					



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**Question 2:**

*Think about your interactions with other students at Stellenbosch University. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion**.*

2.1	How many of your <b>friends at Stellenbosch University</b> are:							
		<b>None (0)</b>	<b>Very Few (1)</b>	<b>Some (2)</b>	<b>About Half (3)</b>	<b>Quite a Few (4)</b>	<b>A Lot (5)</b>	<b>All (6)</b>
	<b>white South Africans</b>							
	<b>coloured South Africans</b>							
	<b>black (African) South Africans</b>							
	<b>Indian South Africans</b>							

**IF YOU INDICATED IN QUESTION ONE THAT YOU HAVE WHITE SOUTH AFRICAN FRIENDS AT STELLENBOSCH UNIVERSITY:**

2.2	How often do you spend time with them:							
		<b>Never (0)</b>	<b>Less than Once a Month (1)</b>	<b>Once a Month (2)</b>	<b>Two to Three times a Month (3)</b>	<b>Once a Week (4)</b>	<b>Two to Three times a Week (5)</b>	<b>Daily (6)</b>
	where <b>you</b> live (your residence room / house / flat)?							
	where <b>they</b> live (their residence room / house / flat)?							
	socially?							



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***IF YOU INDICATED IN QUESTION ONE THAT YOU HAVE COLOURED SOUTH AFRICAN FRIENDS AT STELLENBOSCH UNIVERSITY:***

2.3	How often do you spend time with them:							
		Never (0)	Less than Once a Month (1)	Once a Month (2)	Two to Three times a Month (3)	Once a Week (4)	Two to Three times a Week (5)	Daily (6)
	where <b>you</b> live (your residence room / house / flat)?							
	where <b>they</b> live (their residence room / house / flat)?							
	socially?							

***IF YOU INDICATED IN QUESTION ONE THAT YOU HAVE BLACK (AFRICAN) SOUTH AFRICAN FRIENDS AT STELLENBOSCH UNIVERSITY:***

2.4	How often do you spend time with them:							
		Never (0)	Less than Once a Month (1)	Once a Month (2)	Two to Three times a Month (3)	Once a Week (4)	Two to Three times a Week (5)	Daily (6)
	where <b>you</b> live (your residence room / house / flat)?							
	where <b>they</b> live (their residence room / house / flat)?							
	socially?							



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**IF YOU INDICATED IN QUESTION ONE THAT YOU HAVE INDIAN SOUTH AFRICAN FRIENDS AT STELLENBOSCH UNIVERSITY:**

2.5	How often do you spend time with them:							
		<b>Never (0)</b>	<b>Less than Once a Month (1)</b>	<b>Once a Month (2)</b>	<b>Two to Three times a Month (3)</b>	<b>Once a Week (4)</b>	<b>Two to Three times a Week (5)</b>	<b>Daily (6)</b>
	where <b>you</b> live (your residence room / house / flat)?							
	where <b>they</b> live (their residence room / house / flat)?							
	socially?							





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**Question 3:**

Think about **your close white South African friends and members of your family** (including parents, brothers, sisters, cousins etc.). Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion**.

3.1	<b>How many of your close white South African friends</b> have friends who are:							
		<b>None (0)</b>	<b>Very Few (1)</b>	<b>Some (2)</b>	<b>About Half (3)</b>	<b>Quite a Few (4)</b>	<b>A Lot (5)</b>	<b>All (6)</b>
	<b>coloured South Africans</b>							
	<b>black (African) South Africans</b>							
	<b>Indian South Africans</b>							

3.2	<b>How many of your family members</b> have friends who are:							
		<b>None (0)</b>	<b>Very Few (1)</b>	<b>Some (2)</b>	<b>About Half (3)</b>	<b>Quite a Few (4)</b>	<b>A Lot (5)</b>	<b>All (6)</b>
	<b>coloured South Africans</b>							
	<b>black (African) South Africans</b>							
	<b>Indian South Africans</b>							



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*Question 4:*

*Think about your interactions with other students at Stellenbosch University. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion**.*

4.1	How <b>frequently</b> do you have direct, face-to-face interactions with students from each of the following groups at Stellenbosch University?							
		None (0)	Less Than Once a Month (1)	Once a Month (2)	Two to Three Times a Month (3)	Once a Week (4)	Two to Three Times a Week (5)	Daily (6)
	white South African students							
	coloured South African students							
	black (African) South African students							
	Indian South African students							



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Think about your interactions with other students at Stellenbosch University. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion**.

4.2	How <b>pleasant</b> or <b>unpleasant</b> would you rate your direct, face-to-face interactions with:					
		<b>Very Unpleasant (1)</b>	<b>Somewhat Unpleasant (2)</b>	<b>Neither Pleasant Nor Unpleasant (3)</b>	<b>Somewhat Pleasant (4)</b>	<b>Very Pleasant (5)</b>
	<b>white South African students</b>					
	<b>coloured South African students</b>					
	<b>black (African) South African students</b>					
	<b>Indian South African students</b>					

4.3	How <b>positive</b> or <b>negative</b> would you rate your direct, face-to-face interactions with:					
		<b>Very Positive (1)</b>	<b>Somewhat Positive (2)</b>	<b>Neither Positive Nor Negative (3)</b>	<b>Somewhat Negative (4)</b>	<b>Very Negative (5)</b>
	<b>white South African students</b>					
	<b>coloured South African students</b>					
	<b>black (African) South African students</b>					
	<b>Indian South African students</b>					



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*Question 5:*

**IF YOU INDICATED IN THE DEMOGRAPHICS THAT YOU ARE A WHITE SOUTH AFRICAN:**

5.1	Rate the <b>extent to which you Agree or Disagree</b> that each of the following statements:					
		<b>Strongly Disagree (1)</b>	<b>Disagree (2)</b>	<b>Neither Agree Nor Disagree (3)</b>	<b>Agree (4)</b>	<b>Strongly Agree (5)</b>
	Being a white South African is an important part of who I am.					
	Overall, being a white South African has very little to do with how I feel about myself.					
	I feel strong ties with other white South Africans.					



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Question 6:

I want you to ***imagine that you are going to meet and interact with a group of coloured South Africans who you do not know.***

***Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion.*****

6.1	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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*I want you to **imagine that you are going to meet and interact with a group of black (African) South Africans who you do not know.***

***Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion.*****

6.2	In this situation, to what extent would you feel:							
		<b>Not at All (1)</b>	<b>Slightly (2)</b>	<b>A Little (3)</b>	<b>Somewhat (4)</b>	<b>Quite a Bit (5)</b>	<b>Considerably (6)</b>	<b>Extremely (7)</b>
	<b>threatened?</b>							
	<b>anxious?</b>							
	<b>comfortable?</b>							
	<b>awkward?</b>							
	<b>safe?</b>							
	<b>at ease?</b>							



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*I want you to **imagine that you are going to meet and interact with a group of Indian South Africans who you do not know.***

***Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes **your personal experience or opinion.*****

6.3	In this situation, to what extent would you feel:							
		<b>Not at All (1)</b>	<b>Slightly (2)</b>	<b>A Little (3)</b>	<b>Somewhat (4)</b>	<b>Quite a Bit (5)</b>	<b>Considerably (6)</b>	<b>Extremely (7)</b>
	<b>threatened?</b>							
	<b>anxious?</b>							
	<b>comfortable?</b>							
	<b>awkward?</b>							
	<b>safe?</b>							
	<b>at ease?</b>							



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*Question 7:*

*Please rate the extent to which you agree or disagree with each of the following statements.*

7.1		<b>1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree; 7 = Strongly Agree</b>						
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<b>black (African) South Africans and coloured South Africans</b> experience similar levels of discrimination							
	<b>black (African) South Africans and Indian South Africans</b> experience similar levels of discrimination							
	<b>coloured South Africans and Indian South Africans</b> experience similar levels of discrimination							
	white South Africans treat <b>black (African) and coloured South Africans</b> the same							
	white South Africans treat <b>black (African) and Indian South Africans</b> the same							
	white South Africans treat <b>Indian and coloured South Africans</b> the same							
	In general, the <b>black (African) and coloured South African groups</b> are very similar to one another							
	In general, the <b>black (African) and Indian South African groups</b> are very similar to one another							
	In general, the <b>Indian and coloured South African groups</b> are very similar to one another							

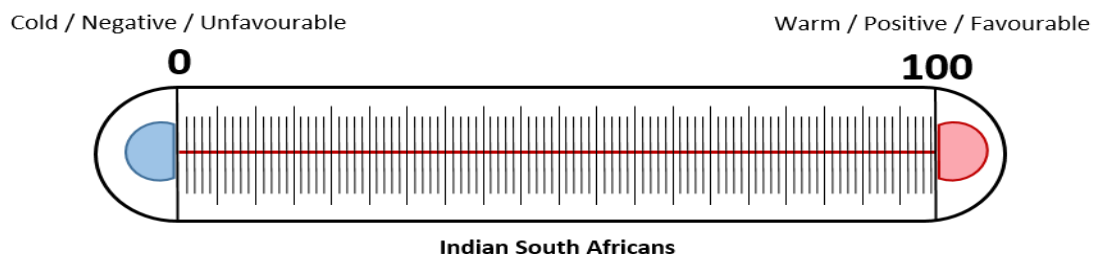
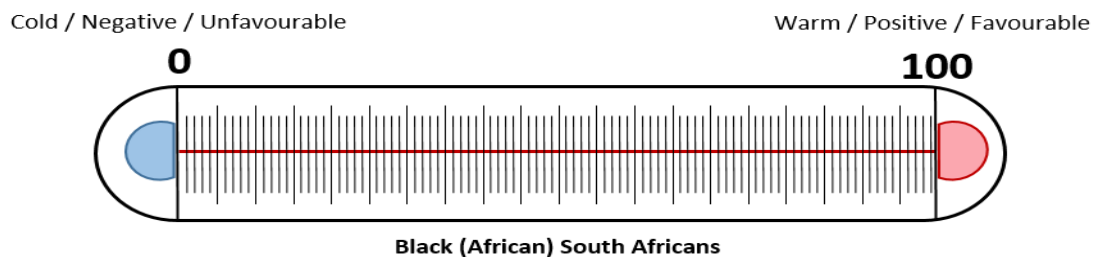
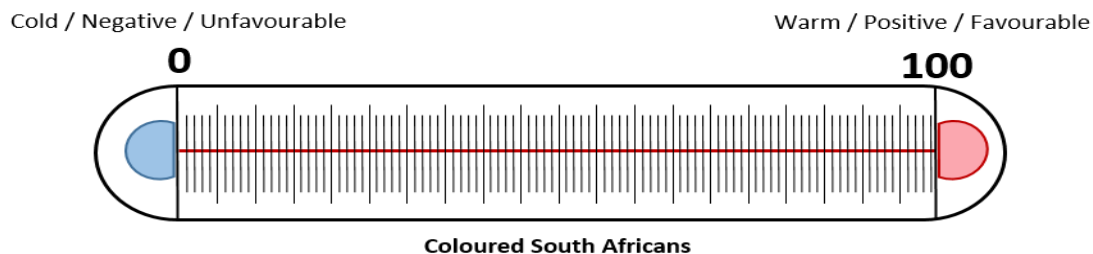
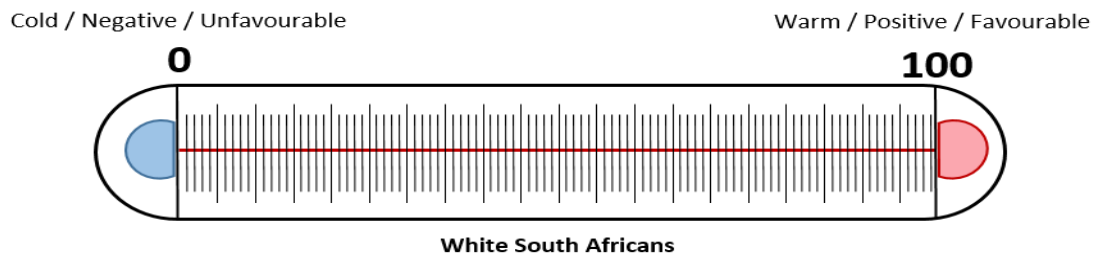




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Question 8:

Think about how you feel about the different South African population groups **in general (NOT specific individuals)**. Use the scale below (from 0 to 100) as a guide. **Make a clear mark on the red line in each thermometer to indicate the position (as accurately as possible) of where your feelings towards the specific group lies.** The lower your rating towards the group (the closer your rating is to zero), the more negative / unfavourable you feel towards the group. The higher your rating towards the group (the closer it is to 100), the more positive / favourable you feel towards the group. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. **Please be as honest as possible.** Your answers will be treated with the strictest confidentiality.





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Question 9:

Based on **your own experience**, please rate where your feelings are located (between 1 and 7) for each pair of feelings **towards white South Africans in general**:

9.1	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust

Based on **your own experience**, please rate where your feelings are located (between 1 and 7) for each pair of feelings **towards coloured South Africans in general**:

9.2	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust



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Based on **your own experience**, please rate where your feelings are located (between 1 and 7) for each pair of feelings **towards black (African) South Africans in general**:

9.3	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust

Based on **your own experience**, please rate where your feelings are located (between 1 and 7) for each pair of feelings **towards Indian South Africans in general**:

9.4	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust



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**Question 10:**

Based on **your own experience**, please rate the extent to which you agree or disagree with each of the following statements.

10.1		<b>1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree;</b> <b>4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree;</b> <b>7 = Strongly Agree</b>						
	<b>In general:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<b>I cannot trust coloured South Africans</b>							
	<b>I cannot rely on coloured South Africans</b> to look out for my best interest as a white South African							
	I am <b>often suspicious</b> when I am in the company of <b>coloured South Africans</b>							
	<b>I cannot trust black (African) South Africans</b>							
	<b>I cannot rely on black (African) South Africans</b> to look out for my best interest as a white South African							
	I am <b>often suspicious</b> when I am in the company of <b>black (African) South Africans</b>							
	<b>I cannot trust Indian South Africans</b>							
	<b>I cannot rely on Indian South Africans</b> to look out for my best interest as a white South African							
	I am <b>often suspicious</b> when I am in the company of <b>Indian South Africans</b>							



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*Question 11:*

*Please rate the extent to which you agree or disagree with each of the following statements.*

11.1		<b>1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree; 7 = Strongly Agree</b>						
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	Some groups of people are simply inferior to other groups							
	It would be good if groups could be equal							
	All group should be given a chance in life							
	We should do what we can to equalize conditions for different groups							
	If certain groups stayed in their place we would have fewer problems							
	It's probably a good thing that certain groups are at the top and other groups are at the Bottom							
	There is <b>a great deal of conflict</b> between <b>coloured South Africans and black (African) South Africans</b>							
	There is <b>a great deal of conflict</b> between <b>coloured South Africans and Indian South Africans</b>							
	There is <b>a great deal of conflict</b> between <b>black (African) South Africans and Indian South Africans</b>							
	There is <b>a great deal of conflict</b> between <b>black (African) South Africans and white South Africans</b>							



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*Question 12:*

*Take a moment to reflect on the various opinions you have about the various South African population groups.*

12.1	How certain are you in your opinions about:						
		<b>Extremely Uncertain (1)</b>	<b>Very Uncertain (2)</b>	<b>Uncertain (3)</b>	<b>Certain (4)</b>	<b>Very Certain (5)</b>	<b>Extremely Certain (6)</b>
	<b>white South Africans?</b>						
	<b>coloured South Africans?</b>						
	<b>black (African) South Africans?</b>						
	<b>Indian South Africans?</b>						

**APPENDIX F****Pre- and Post-Task Anxiety Measure**

<b>OFFICIAL USE ONLY (PRE)</b> AB-ID:
--

1



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***Social Relations and Friendship Formation  
 Among Stellenbosch University Students  
 2019***

Thank you for providing informed consent for participating in this study. Your participation will make a valuable contribution towards our understanding of those factors that promote social relations and friendship formation among Stellenbosch University students.

*Before we start the task, please think about how you are feeling right now. Please select the answer option that best describes how you are feeling at the moment.*

1.1	Now, before the task, to what extent do you feel:							
		<b>Not at All (1)</b>	<b>Slightly (2)</b>	<b>A Little (3)</b>	<b>Somewhat (4)</b>	<b>Quite a Bit (5)</b>	<b>Considerably (6)</b>	<b>Extremely (7)</b>
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							

OFFICIAL USE ONLY (POST)  
AB-ID:

2



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*Social Relations and Friendship Formation  
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2019*

Thank you for providing informed consent for participating in this study. Your participation will make a valuable contribution towards our understanding of those factors that promote social relations and friendship formation among Stellenbosch University students.

*Please think about how you are feeling now that the task is complete. Please select the answer option that best describes how you are feeling at the moment.*

1.1	Now that the task is complete, to what extent do you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



## **APPENDIX G**

### **Task Presented to Control Condition Participants at Time 2**

**You are going to be asked a series of questions and I want you to answer them as if you were answering for your friend and not yourself. Please write your answers on the sheet of paper provided. Make sure not to reveal your answers to your friend till you have answered all five of the provided questions.**

#### **The Questions are as follows:**

1. What is your favourite colour?
2. What is your favourite type of food?
3. Do you generally prefer to be indoors or outside?
4. What is your mother's first name?
5. What is one of your greatest fears?

## APPENDIX H

### Closeness Induction Task

#### LIST ONE

#### ONE MINUTE

#### INSTRUCTIONS:

*Participants, please ask (and answer) as many of these questions to one another during the next minute.*

*There is no rush, feel free to take your time – you do not need to get through all the questions, but **please only stick to the questions on this list.***

1. What is your name?
2. How old are you?
3. Where are you from?
4. What year are you at the University of Stellenbosch?
5. What do you think you might major in? Why?
6. What made you come to the University of Stellenbosch?
7. What is your favourite class at the University of Stellenbosch? Why?

**LIST TWO****THREE MINUTES****INSTRUCTIONS:**

*Participants, please ask (and answer) as many of these questions to one another during the next minute.*

*There is no rush, feel free to take your time – you do not need to get through all the questions, but **please only stick to the questions on this list.***

1. What do you enjoy doing in your spare time?
2. What would you like to do after graduating from the University of Stellenbosch?
3. What would be the perfect lifestyle for you?
4. What is something you have always wanted to do but probably never will be able to do?
5. If you could travel anywhere in the world, where would you go and why?
6. What is one strange thing that has happened to you since you've been at the University of Stellenbosch?
7. What is one embarrassing thing that has happened to you since arriving at University of Stellenbosch?
8. What is one thing happening in your life that makes you stressed out?
9. If you could change anything that happened to you in high school, what would that be?
10. If you could change one thing about yourself, what would that be?
11. Do you miss your family?
12. What is one habit you'd like to break?

**LIST THREE****FIVE MINUTES****INSTRUCTIONS:**

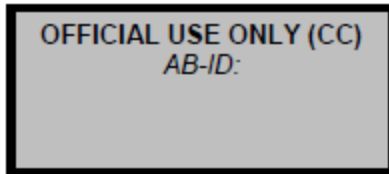
*Participants, please ask (and answer) as many of these questions to one another during the next minute.*

*There is no rush, feel free to take your time – you do not need to get through all the questions, but **please only stick to the questions on this list.***

1. If you could have one wish granted, what would that be?
2. Is it difficult or easy for you to meet people? Why?
3. Describe the last time you felt lonely.
4. What is one emotional experience you've had with a good friend?
5. What is one of your biggest fears?
6. What is your most frightening early memory?
7. What is your happiest early childhood memory?
8. What is one thing about yourself that most people would consider surprising?
9. What is one recent accomplishment that you are proud of?

## APPENDIX I

### Survey 2 (Control Condition Participants Only)



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2019*

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Thank you for providing informed consent for participating in this study. Your participation will make a valuable contribution towards our understanding of those factors that promote social relations and friendship formation among Stellenbosch University students.

This is the second of three surveys that you need to complete in this study. After completing all three surveys you will be given a R100 Neelsie cash voucher.

---

### SURVEY TWO

#### INSTRUCTIONS:

1. Please **read each question carefully.**
2. Please **answer each question as accurately as possible.**
3. Please **do not think to long about each answer.** Your **first answer** or your **first impression** is **generally the most accurate.** There are **no right or wrong answers.**
4. Please **be honest** with your answers. Your answers will be treated with **strict confidentiality.**



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## DEMOGRAPHICS

### INSTRUCTIONS:

*We would like to first ask you some questions about yourself. Please answer each question below as accurately as possible.*

***Please write neatly and clearly.***

1. Please indicate the broad South African population group you would identify yourself with: (Please note: *The Department of Psychology at Stellenbosch University does not acknowledge or endorse the legitimacy of the artificial categories below, and accepts that individuals might categorize themselves in a number of different ways over-and-above, or other than just, ethnicity. The category you select below does not mean that you endorse the category rather that it provides a context for understanding your point of view or experiences.*):

☐ white South African      ☐ coloured South African      ☐ Indian South African  
☐ black (African) South African      ☐ Asian South African      Other: \_\_\_\_\_

*In order to match up your three questionnaires, we will need a unique code for each participant. This code is made up in such a way that there is no way in which the researchers will be able to trace it back to you.*

The first part of your code: Please enter the LAST four digits of your student number in this box.

The second part of your code: Please enter your day of birth (between 01 and 31) into this box.



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## MAIN SURVEY

### INSTRUCTIONS:

*Please answer each question below as accurately as possible. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answers will be treated with the strictest confidentiality.*

Question 1:

*I want you to imagine that you are going to meet and interact with a group of coloured South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best describes your personal experience or opinion**.*

1.1	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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*I want you to imagine that you are going to meet and interact with a group of black (African) South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best describes your personal experience or opinion.***

1.2	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							





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*I want you to imagine that you are going to meet and interact with a group of Indian South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best describes your personal experience or opinion**.*

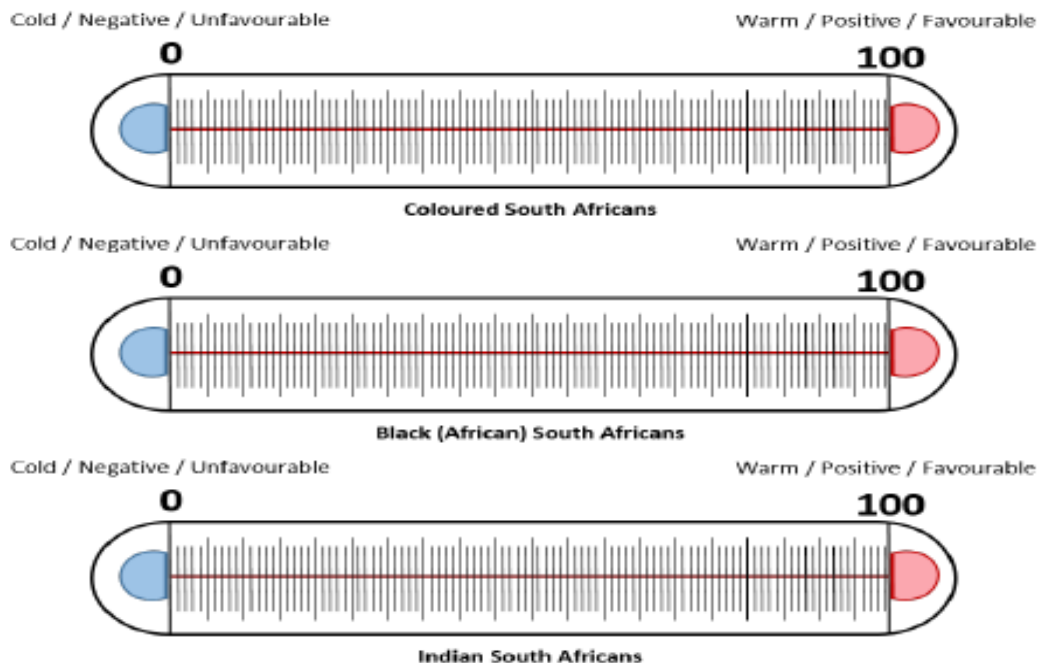
1.3	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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**Question 2:**

*Think about how you feel about the different South African population groups in general (NOT specific individuals). Use the scale below (from 0 to 100) as a guide. Make a clear mark on the red line in each thermometer to indicate the position (as accurately as possible) of where your feelings towards the specific group lies. The lower your rating towards the group (the closer your rating is to zero), the more negative / unfavourable you feel towards the group. The higher your rating towards the group (the closer it is to 100), the more positive / favourable you feel towards the group. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answers will be treated with the strictest confidentiality.*





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*Question 3:*

*Based on your own experience, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards coloured South Africans in general:*

3.1	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust

*Based on your own experience, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards black (African) South Africans in general:*

3.2	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust



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*Based on **your own experience**, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards Indian South Africans in general:*

3.3	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust



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**Question 4:**

*Based on your own experience, please rate the extent to which you agree or disagree with each of the following statements.*

4.1	In general:	1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree; 7 = Strongly Agree						
		<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> </table>	1	2	3	4	5	6
1	2	3	4	5	6	7		
	I cannot trust coloured South Africans							
	I cannot rely on coloured South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of coloured South Africans							
	I cannot trust black (African) South Africans							
	I cannot rely on black (African) South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of black (African) South Africans							
	I cannot trust Indian South Africans							
	I cannot rely on Indian South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of Indian South Africans							



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*Question 5:*

*Take a moment to reflect on the various opinions you have about the various South African populations groups.*

5.1	How certain are you in your opinions about:						
		Extremely Uncertain (1)	Very Uncertain (2)	Uncertain (3)	Certain (4)	Very Certain (5)	Extremely Certain (6)
	coloured South Africans?						
	black (African) South Africans?						
	Indian South Africans?						

**APPENDIX J****Survey 2 (Extended Contact Condition Participants Only)**

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*Social Relations and Friendship Formation  
Among Stellenbosch University Students  
2019*

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Thank you for providing informed consent for participating in this study. Your participation will make a valuable contribution towards our understanding of those factors that promote social relations and friendship formation among Stellenbosch University students.

This is the second of three surveys that you need to complete in this study. After completing all three surveys you will be given a R100 Neelsie cash voucher.

---

**SURVEY TWO****INSTRUCTIONS:**

1. Please **read each question carefully.**
2. Please **answer each question as accurately as possible.**
3. Please **do not think to long about each answer.** Your **first answer** or your **first impression** is **generally the most accurate.** There are no right or wrong answers.
4. Please **be honest** with your answers. Your answers will be treated with **strict confidentiality.**



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## DEMOGRAPHICS

### INSTRUCTIONS:

*We would like to first ask you some questions about yourself. Please answer each question below as accurately as possible.*

*Please write neatly and clearly.*

1. Please indicate the broad South African population group you would identify yourself with: (Please note: *The Department of Psychology at Stellenbosch University does not acknowledge or endorse the legitimacy of the artificial categories below, and accepts that individuals might categorize themselves in a number of different ways over-and-above, or other than just, ethnicity. The category you select below does not mean that you endorse the category rather that it provides a context for understanding your point of view or experiences.*):

☐ white South African      ☐ coloured South African      ☐ Indian South African  
☐ black (African) South African      ☐ Asian South African      Other: \_\_\_\_\_

*In order to match up your three questionnaires, we will need a unique code for each participant. This code is made up in such a way that there is no way in which the researchers will be able to trace it back to you.*

The first part of your code: Please enter the LAST four digits of your student number in this box.

The second part of your code: Please enter your day of birth (between 01 and 31) into this box.





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## MAIN SURVEY

### INSTRUCTIONS:

*Please answer each question below as accurately as possible. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answers will be treated with the strictest confidentiality.*

#### Question 1:

*I want you to imagine that you are going to meet and interact with a group of coloured South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that best describes your personal experience or opinion.*

1.1	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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*I want you to imagine that you are going to meet and interact with a group of black (African) South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best describes your personal experience or opinion.***

1.2	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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*I want you to imagine that you are going to meet and interact with a group of Indian South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best** describes your personal experience or opinion.*

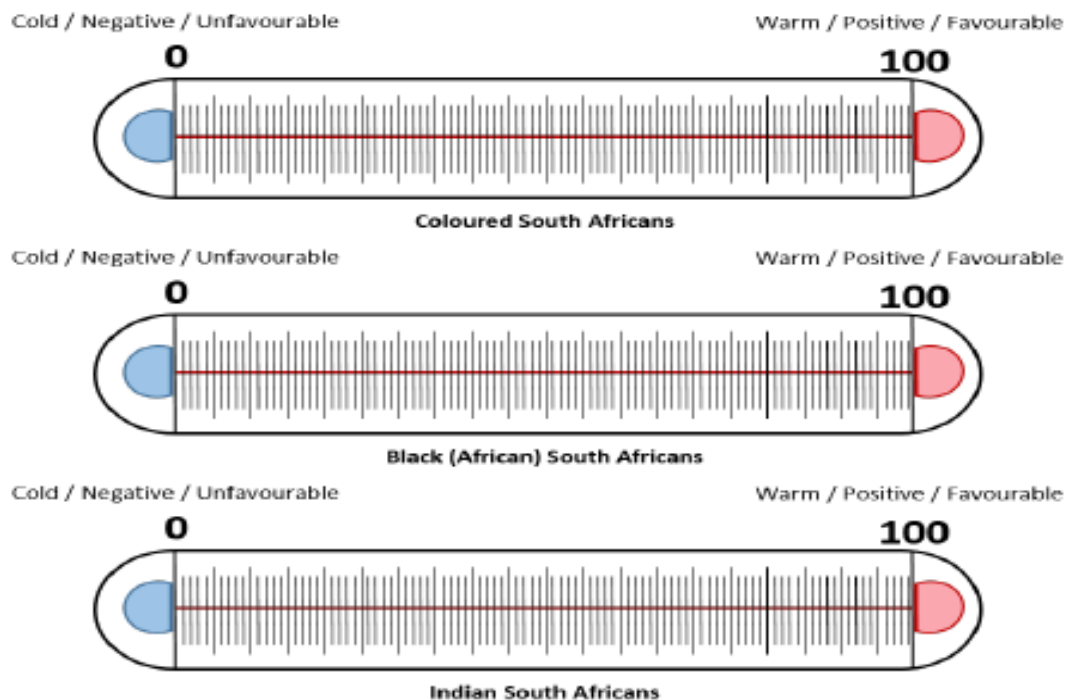
1.3	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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**Question 2:**

*Think about how you feel about the different South African population groups in general (NOT specific individuals). Use the scale below (from 0 to 100) as a guide. **Make a clear mark on the red line in each thermometer to indicate the position (as accurately as possible) of where your feelings towards the specific group lies.** The lower your rating towards the group (the closer your rating is to zero), the more negative / unfavourable you feel towards the group. The higher your rating towards the group (the closer it is to 100), the more positive / favourable you feel towards the group. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answers will be treated with the strictest confidentiality.*





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**Question 3:**

*Based on your own experience, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards coloured South Africans in general:*

3.1	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust

*Based on your own experience, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards black (African) South Africans in general:*

3.2	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust



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*Based on **your own experience**, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards **Indian South Africans in general**:*

3.3	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust



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**Question 4:**

*Based on your own experience, please rate the extent to which you agree or disagree with each of the following statements.*

4.1	In general:	1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree; 7 = Strongly Agree						
		1	2	3	4	5	6	7
	I cannot trust coloured South Africans							
	I cannot rely on coloured South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of coloured South Africans							
	I cannot trust black (African) South Africans							
	I cannot rely on black (African) South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of black (African) South Africans							
	I cannot trust Indian South Africans							
	I cannot rely on Indian South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of Indian South Africans							



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**Question 5:**

*Take a moment to reflect on the various opinions you have about the various South African populations groups.*

5.1	How certain are you in your opinions about:						
		<b>Extremely Uncertain (1)</b>	<b>Very Uncertain (2)</b>	<b>Uncertain (3)</b>	<b>Certain (4)</b>	<b>Very Certain (5)</b>	<b>Extremely Certain (6)</b>
	<b>coloured South Africans?</b>						
	<b>black (African) South Africans?</b>						
	<b>Indian South Africans?</b>						





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*Question 6:*

*Take a moment to think about the interaction you have observed between your friend and the other participant. **Indicate the extent to which you agree or disagree with the following statement:***

6.1. The conversation they just had in the task is a good way to get to know somebody:

Completely Disagree (1)	Somewhat Disagree (2)	Neither Agree Nor Disagree (3)	Somewhat Agree (4)	Completely Agree (5)

6.2. When you think about the conversation you just observed as a whole (and the information that your friend shared and that the other participant shared), to what extent do you think the conversation you just observed was of a personal/private nature?

Not at all Personal / Private (1)	Hardly Personal / Private (2)	Somewhat Personal / Private (3)	Quite Personal / Private (4)	Extremely Personal / Private (5)



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**Question 7:**

*Please think about the conversation you have just observed between your friend and the other black (African) South African participant. Now please answer the following questions:*

7.1. To what extent did you feel as if your friend was acting/behaving as a typical member of the white South African community during the conversation?

Not at All (1)	A Little (2)	Quite a Bit (3)	A Lot (4)	Completely (5)

7.2. To what extent do you think the black (African) South African participant your friend conversed with is a typical representative/example of the black (African) South African community?

Not at All (1)	A Little (2)	Quite a Bit (3)	A Lot (4)	Completely (5)

7.2. During the conversation, to what extent were you aware that your friend was interacting as a white South African interacting with a black (African) South African?

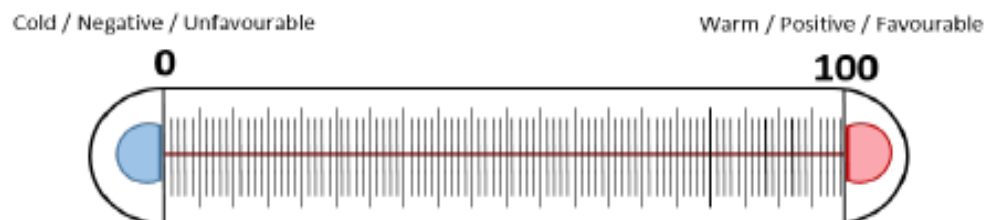
Not at All (1)	A Little (2)	Quite a Bit (3)	A Lot (4)	Completely (5)



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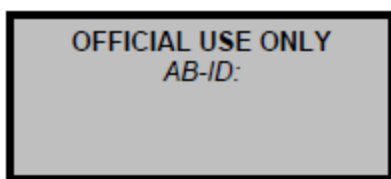
**Question 8:**

Think about how you feel about the participant your friend just had the conversation with. Using the scale below (from 0 to 100) as a guide, make a clear mark on the red line in the thermometer to indicate the position (as accurately as possible) of where your feelings towards this participant lies. The lower your rating of the participant (the closer your rating is to zero), the more negative / unfavourable you feel towards her. The higher your rating towards the participant (the closer it is to 100), the more positive / favourable you feel towards her. Do not think too long about your answer. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answer will be treated with the strictest confidentiality.



## APPENDIX K

### Survey 3 (All Participants)



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2019*

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Thank you for participating in this study. Your participation continues to make a valuable contribution towards our understanding of those factors that promote social relations and friendship formation among Stellenbosch University students.

This is the final survey that you need to complete in this study. After completing this survey you will receive a R100 Neelsie cash voucher.

---

### SURVEY THREE

#### INSTRUCTIONS:

1. Please **read each question carefully.**
2. Please **answer each question as accurately as possible.**
3. Please **do not think to long about each answer.** Your **first answer** or your **first impression** is **generally the most accurate.** There are no right or wrong answers.
4. Please **be honest** with your answers. Your answers will be treated with **strict confidentiality.**



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## DEMOGRAPHICS

### INSTRUCTIONS:

*We would like to first ask you some questions about yourself. Please answer each question below as accurately as possible.*

*Please write neatly and clearly.*

1. Please indicate the broad South African population group you would identify yourself with: (Please note: *The Department of Psychology at Stellenbosch University does not acknowledge or endorse the legitimacy of the artificial categories below, and accepts that individuals might categorize themselves in a number of different ways over-and-above, or other than just, ethnicity. The category you select below does not mean that you endorse the category rather that it provides a context for understanding your point of view or experiences.*):

☐ white South African      ☐ coloured South African      ☐ Indian South African  
☐ black (African) South African      ☐ Asian South African      Other: \_\_\_\_\_

*In order to match up your three questionnaires, we will need a unique code for each participant. This code is made up in such a way that there is no way in which the researchers will be able to trace it back to you.*

The first part of your code: Please enter the LAST four digits of your student number in this box.

The second part of your code: Please enter your day of birth (between 01 and 31) into this box.



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## MAIN SURVEY

### INSTRUCTIONS:

*Please answer each question below as accurately as possible. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answers will be treated with the strictest confidentiality.*

### Question 1:

*Based on **your own experience**, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards coloured South Africans in general:*

1.1	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	suspicious	1	2	3	4	5	6	7	trusting
	respect	1	2	3	4	5	6	7	contempt
	admiration	1	2	3	4	5	6	7	disgust



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*Based on your own experience, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards black (African) South Africans in general:*

1.2	warm	1	2	3	4	5	6	7	cold
	negative	1	2	3	4	5	6	7	positive
	friendly	1	2	3	4	5	6	7	hostile
	Suspicious	1	2	3	4	5	6	7	trusting
	Respect	1	2	3	4	5	6	7	contempt
	Admiration	1	2	3	4	5	6	7	disgust

*Based on your own experience, please rate where your feelings are located (between 1 and 7) for each pair of feelings towards Indian South Africans in general:*

1.3	Warm	1	2	3	4	5	6	7	cold
	Negative	1	2	3	4	5	6	7	positive
	Friendly	1	2	3	4	5	6	7	hostile
	Suspicious	1	2	3	4	5	6	7	trusting
	Respect	1	2	3	4	5	6	7	contempt
	Admiration	1	2	3	4	5	6	7	disgust



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**Question 2:**

*Based on your own experience, please rate the extent to which you agree or disagree with each of the following statements.*

2.1	In general:	1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree; 7 = Strongly Agree						
		1	2	3	4	5	6	7
	I cannot trust coloured South Africans							
	I cannot rely on coloured South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of coloured South Africans							
	I cannot trust black (African) South Africans							
	I cannot rely on black (African) South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of black (African) South Africans							
	I cannot trust Indian South Africans							
	I cannot rely on Indian South Africans to look out for my best interest as a white South African							
	I am often suspicious when I am in the company of Indian South Africans							

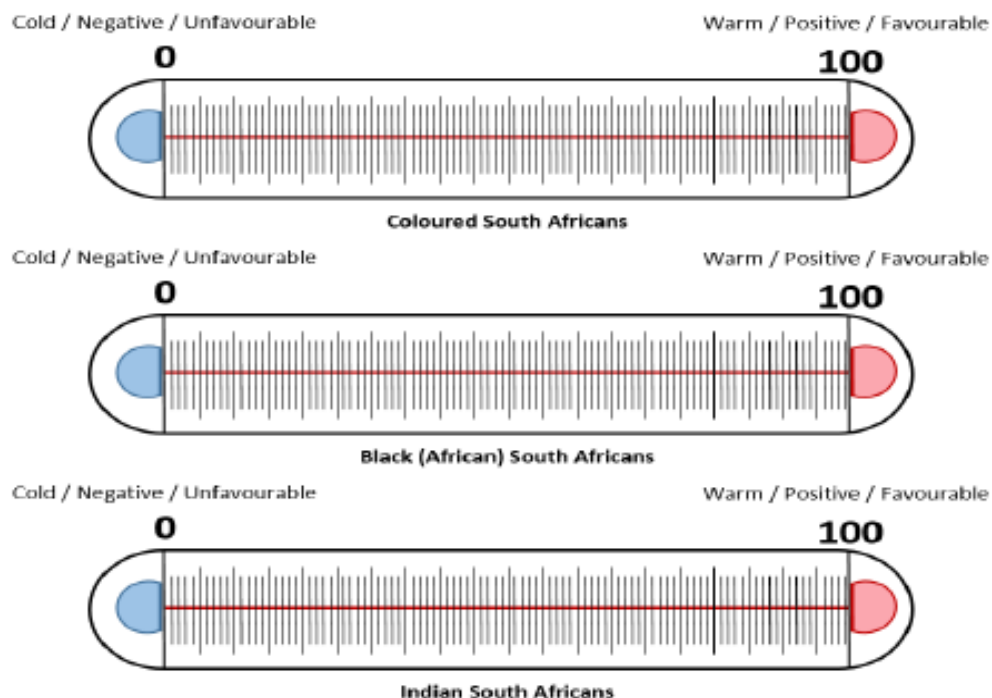




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**Question 3:**

*Think about how you feel about the different South African population groups in general (NOT specific individuals). Use the scale below (from 0 to 100) as a guide. Make a clear mark on the red line in each thermometer to indicate the position (as accurately as possible) of where your feelings towards the specific group lies. The lower your rating towards the group (the closer your rating is to zero), the more negative / unfavourable you feel towards the group. The higher your rating towards the group (the closer it is to 100), the more positive / favourable you feel towards the group. Do not think too long about your answers. There are no right or wrong answers. Your first answer or first impression is generally the most accurate. Please be as honest as possible. Your answers will be treated with the strictest confidentiality.*





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**Question 4:**

*I want you to imagine that you are going to meet and interact with a group of coloured South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best describes your personal experience or opinion.***

4.1	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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*I want you to imagine that you are going to meet and interact with a group of black (African) South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best describes your personal experience or opinion.***

4.2	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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*I want you to imagine that you are going to meet and interact with a group of Indian South Africans who you do not know.*

*Think about how you might feel being in such a situation. Now answer each of the following questions as honestly and as accurately as possible. Please select the answer option that **best describes your personal experience or opinion**.*

4.3	In this situation, to what extent would you feel:							
		Not at All (1)	Slightly (2)	A Little (3)	Somewhat (4)	Quite a Bit (5)	Considerably (6)	Extremely (7)
	threatened?							
	anxious?							
	comfortable?							
	awkward?							
	safe?							
	at ease?							



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*Question 5:*

*Take a moment to reflect on the various opinions you have about the various South African populations groups.*

5.1	How certain are you in your opinions about:						
		Extremely Uncertain (1)	Very Uncertain (2)	Uncertain (3)	Certain (4)	Very Certain (5)	Extremely Certain (6)
	coloured South Africans?						
	black (African) South Africans?						
	Indian South Africans?						